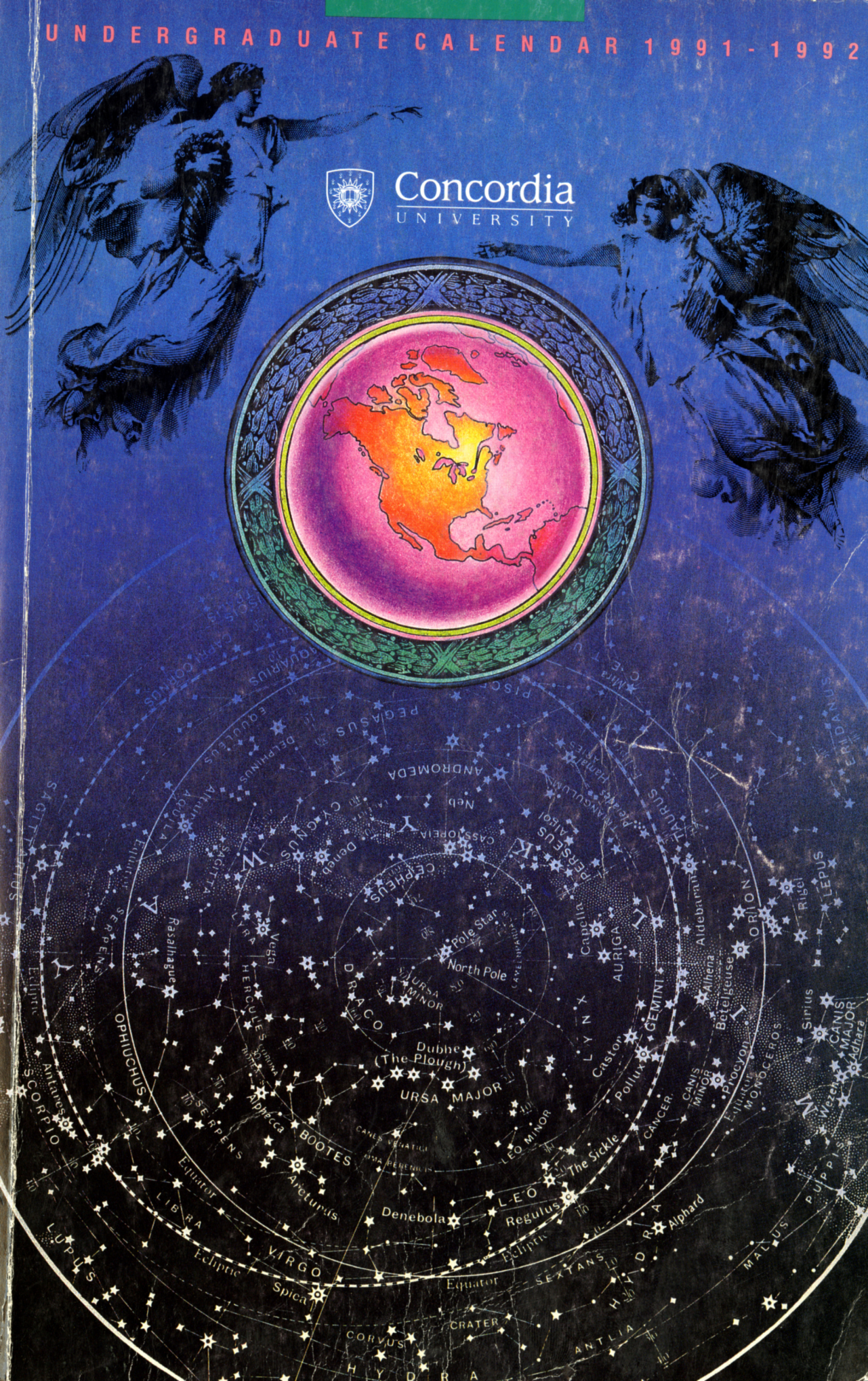
UNDERGRADUATE CALENDAR 1991-1992

Concordia
UNIVERSITY



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1455 de Maisonneuve Blvd. W.
Montréal, Québec
H3G 1M8

Loyola Campus
7141 Sherbrooke St. W.
Montréal, Québec
H4B 1R6

For information concerning graduate programmes, contact the Division of Graduate Studies, telephone (514) 848-3800. The office is located at 2145 Mackay Street near the Hall Building.

The Senate and the Board of Governors of the University reserve the right to make changes in this calendar without prior notice.

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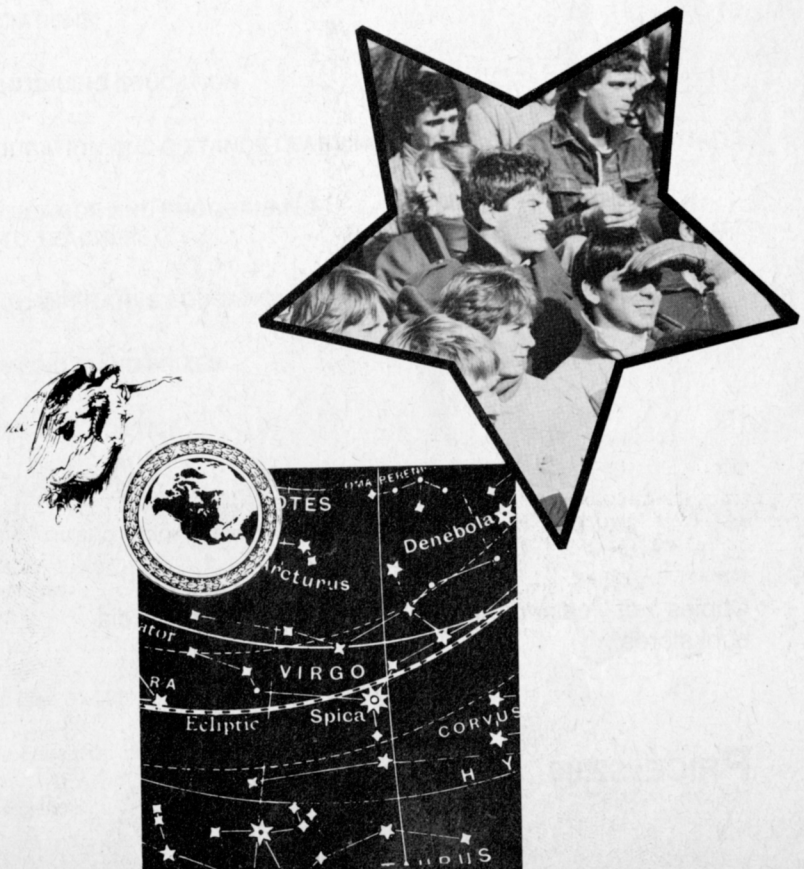
UNDERGRADUATE CALENDAR 1991-1992



This is the only official listing of undergraduate courses offered at Concordia University.

Not all courses listed in this Calendar are offered this year. Students are advised to consult the Undergraduate Class Schedule for a timetable of courses offered.

Copies of calendar are available at Concordia bookstores.

PRICE: $2.00 plus mailing and handling

TABLE OF CONTENTS

	Section	Page
ACADEMIC CALENDAR	**11**	13
ADMINISTRATION	**12**	19
ADMISSION REGULATIONS	**13**	25
MATURE ENTRY	**14**	37
TUITION AND FEES	**15**	43
ACADEMIC REGULATIONS	**16**	47
RIGHTS AND RESPONSIBILITIES	**17**	63
STUDENT SERVICES	**18**	77
Department of Fitness, Recreation and Athletics	18.1	78
Concordia Guidance Services	18.2	79
Scholarship and Financial Aid	18.3	80
Student Life and Student Services	18.4	97
Lacolle Centre for Educational Innovation	18.5	99
International Students	18.6	100
STUDENT ASSOCIATIONS	**19**	103
CENTRE FOR CONTINUING EDUCATION	**20**	107
OFF-CAMPUS EDUCATION AND DISTANCE LEARNING	**21**	113
TEACHER CERTIFICATION AND PROGRAMMES OF INTEREST TO TEACHERS	**22**	117
INSTITUTE FOR CO-OPERATIVE EDUCATION	**23**	122
CONVOCATION MEDALS AND PRIZES	**24**	127
FACULTY OF ARTS AND SCIENCE	**31**	131
Arts and Science	31.001	132
Programmes and Admission Requirements	31.002	134
Degree Requirements	31.003	137
Joint Programmes	31.004	140
Adult Education (see 31.090.1)		
Andragogy (see Education 31.090: Adult Education 31.090.1)		
Applied Social Science	31.010	141

Biology	31.030	145
Canadian Studies	31.040	154
Chemistry and Biochemistry	31.050	155
Classics	31.060	163
Communication Studies	31.070	168
Economics	31.080	177
Education	31.090	185
English	31.100	194
English as a Second Language (see 31.320)		
Études Françaises	31.110	206
Exercise Science	31.120	222
Geography	31.130	228
Geology	31.140	234
History	31.160	240
Interdisciplinary Studies	31.170	250
Journalism	31.180	253
Leisure Studies	31.185	256
Library Studies	31.190	259
Mathematics and Statistics	31.200	263
Modern Languages and Linguistics	31.210	272
Philosophy	31.220	284
Physics	31.230	290
Political Science	31.240	297
Psychology	31.250	306
Religion	31.270	314
Russian Studies	31.280	321
Science/Mathematics for Teachers	31.290	322
Science and Human Affairs	31.300	326
Sociology and Anthropology	31.310	329
Teaching of English as a Second Language	31.320	339
Theological Studies	31.330	345
Urban Studies	31.340	350
Women's Studies (see 31.560)		
Computer Science	31.400	352
Colleges, Institutes and Schools	31.500	353
Institute for Co-operative Education	31.515	354
Liberal Arts College	31.520	355
Lonergan University College	31.530	359
School of Community and Public Affairs	31.540	362
Science College	31.550	365
Simone de Beauvoir Institute and Women's Studies	31.560	368

FACULTY OF COMMERCE AND ADMINISTRATION	**61**	375
Commerce and Administration	61.10	376
Admission Requirements	61.20	376
General Information	61.30	379
Accountancy	61.40	380
Decision Sciences and Management Information Systems	61.50	383
Economics	61.60	388
Finance	61.70	389
International Business	61.80	392
Management	61.90	394
Marketing	61.100	399
Transportation and Distribution Management	61.110	402
Administration	61.120	402
Business Communications	61.130	402
Business Studies	61.140	403
Computer Science	61.150	403
Special Certificate Programmes	61.160	403
Special Programmes in Accountancy	61.170	404
FACULTY OF ENGINEERING AND COMPUTER SCIENCE	**71**	409
Faculty of Engineering and Computer Science	71.10	410
Bachelor of Engineering	71.20	412
Centre for Building Studies	71.30	414
Department of Civil Engineering	71.40	416
Department of Electrical and Computer Engineering	71.50	418
Department of Mechanical Engineering	71.60	421
Course Descriptions	71.70	425
Department of Computer Science	71.80	442
Certificate Programme in Quality Control	71.90	451
FACULTY OF FINE ARTS	**81**	455
Programmes and Admission Requirements	81.10	457
Degree Requirements	81.20	458
Faculty of Fine Arts Programmes and Courses	81.30	459
Inter-Related Arts	81.40	461
Art Education and Art Therapy	81.50	462
Art History	81.60	465
Cinema	81.70	471
Contemporary Dance	81.80	482
Design Art	81.90	484
Music	81.100	487
Painting and Drawing	81.110	497

Printmaking and Photography 81.120 501

Sculpture, Ceramics and Fibres 81.130 506

Theatre 81.140 510

FACULTY **100** 519

EQUIVALENTS INDEX **200** 541

GRADUATE PROGRAMMES **300** 555

INDEX **400** 559

Concordia
UNIVERSITY

Concordia University is one of the largest urban universities in Canada. It has two campuses - one in downtown Montréal (Sir George Williams), the other in a residential setting in the city's west end (Loyola).

The University has long promoted accessibility, innovation and an interdisciplinary approach to learning as its fundamental characteristics. As an urban university, it is also responsive to Montréal's bilingual and multicultural environment, and has a strong tradition in part-time education.

Approximately 91% of Concordia's students are Quebecers; 5% come from other Canadian provinces and the remaining 4% are International students. Approximately 14% of Concordia students list French as their mother tongue.

In 1989 Concordia students earned more than 530 scholarships and fellowships, including a fourth Rhodes Scholarship. Approximately 3,500 students a year are granted degrees at the graduate and undergraduate levels.

Concordia employs almost 2,800 people, both full-time and part-time, including 700 full-time professors and 780 part-time instructors. Among the latter group is a large number of professionals drawn from the artistic community and the business world.

The value of grants and contracts alloted to Concordia researchers has increased by 123% since 1982. Particularly active areas of research are Electrical Engineering, Mechanical Engineering, Psychology and Computer Science. Other research strengths are Building Studies, Transportation Engineering, Cell and Molecular Biology, Behavioural Neurobiology, Human Development and Management Studies.

Concordia professors have travelled to more than 100 countries during the past decade, and Concordia continues to play host to visiting students and professors from every corner of the globe. Research and study programmes have been held recently in Brazil, Costa Rica, France, Germany, Great Britain, Greece, Hong Kong, India, Israel, Italy, Japan, The People's Republic of China, Poland and the United States.

The University holds the distinction of being the first in the western world to establish a joint doctoral programme with a university in The People's Republic of China, and Concordia remains one of the most active Canadian universities in that country. Formal exchange programmes have been established with eight of the PRC's leading academic institutions. As a consequence, Concordia professors now travel to China to teach PhD courses in Civil Engineering, Computer Science, and a growing array of other disciplines in the arts, sciences and engineering.

Concordia is one of two universities in Québec and the only one in Montréal with a Co-operative Education programme, a process by which academic study terms are alternated with work terms in business and industry to give students practical, on-the-job experience. The areas of work experience included in the Concordia programme are Building Engineering, Chemistry, Computer Science, Economics, Exercise Science, Mathematics and Physics.

Established in 1974 with the merger of Loyola College and Sir George Williams University, Concordia offers more than 160 graduate and undergraduate programmes in four Faculties: Arts and Science, Commerce and Administration, Engineering and Computer Science, and Fine Arts. At the bachelor's level, the University offers the degrees of Bachelor of Administration, Bachelor of Arts, Bachelor of Commerce, Bachelor of Computer Science, Bachelor of Education, Bachelor of Engineering, Bachelor of Fine Arts, and Bachelor of Science.

At the master's level, the University awards the degrees of Master of Arts, Master of Science, Master of Computer Science, Master of Engineering, Master of Fine Arts, Master in the Teaching of Mathematics, and Master of Business Administration.

Programmes leading to the degree of Doctor of Philosophy are offered in Administration, Art Education, Building Engineering, Chemistry, Civil Engineering, Communication, Computer Science, Economics, Educational Technology, Electrical and Computer Engineering, History, Humanities, Mechanical Engineering, Physics, Psychology, Religion, and in Special Individual programmes.

The University also offers graduate diploma programmes in Accountancy, Adult Education, Advanced Music Performance Studies, Art Education, Art Therapy, Communication Studies, Computer Science, Early Childhood Education, Economics, Ecotoxicology, Institutional Administration, Instructional Technology, Journalism, Library Studies, Sports Administration, Theological, Religious and Ethical Studies, and Translation.

Enrolment in the 1990-91 academic year was:

Full-time undergraduate	11,825	Full-time graduate	1,883
Part-time undergraduate	8,360	Part-time graduate	1,077
Other (credit non-degree)	2,629		

In addition to the programmes described in this calendar and in the Graduate Studies Calendar, the University offers a wide range of summer courses and programmes on both campuses. A separate publication listing summer offerings is published annually.

Libraries

The Concordia Library system consists of three facilities located on the two campuses. On the Sir George Williams Campus are the Norris Library, which houses materials on the humanities, social sciences, fine arts and commerce, and the Science and Engineering Library, with a collection relating to science and technology. The Georges P. Vanier Library on the Loyola Campus covers all these subject areas under one roof. A $40 million library complex is currently under construction downtown to consolidate all the Sir George Williams' library facilities.

The collection of more than one million documents is growing at an average rate of 65,000 items per year, and includes books, periodicals, government publications, technical reports, microforms, non-print (audio-visual) material and special collections.

Students may use libraries on both campuses. Reference services are provided to assist in identifying and locating materials. If these are not available at Concordia they may be consulted in other Montréal libraries or borrowed through the Interlibrary Loans service, which gives access to items from virtually any library in the world.

Students wishing more complete information on Concordia's libraries are invited to pick up a copy of the *Library Owner's Manual* which is available free of charge in all libraries.

Computing Services

Computing Services provides resources and services to students, researchers, the library, and the administration of the University. Facilities include a high-speed data communications network linking Concordia to regional, national and international communities, a number of mainframe-class computers, several super-mini computers, almost 200 public access personal computers and workstations, more than 100 timesharing terminals, vector processing, graphics and word-processing facilities. A comprehensive software library is available including numerical analysis routines, statistical processing packages, data-base products, simulation languages, graphics support, all widely used computer languages, text processing, on-line news services and many other general purpose utilities. Computing Services provides around the clock computer access. Consulting services are available during normal University operating hours. Newsletters and handouts outlining services and facilities in more detail are available at the service areas located on each campus.

Art Galleries

The Concordia Art Gallery is located on the mezzanine floor of the Henry F. Hall Building. The Gallery, one of the major small museums in Canada, presents a year-round programme of exhibitions of Canadian art in all visual media. While most of these exhibitions are organized by the Concordia Art Gallery, shows are often borrowed from other art institutions across Canada. The Gallery has a permanent collection of Canadian art with a special emphasis on modern and contemporary work. The collection includes painting, sculpture, works on paper, mixed media and photography. Selections from the collection are frequently included in the Gallery's exhibitions. Illustrated bilingual publications accompany the majority of the exhibitions.

The V.A.V. Gallery, devoted to work by undergraduate students in the visual arts programmes of the Faculty of Fine Arts, is located on the main floor of the Visual Arts Building at the corner of René-Lévesque Boulevard and Crescent Street. In the Bourget Building on Mountain Street, exhibitions of work by Fine Arts Graduate students are presented in the gallery on the main floor.

Theatre, Music and Arts Studios

The Faculty of Fine Arts operates several performing arts facilities on the Loyola Campus, including a state-of-the-art concert hall, seating 600, and the Chameleon Theatre, a flexible teaching facility serving theatre students. Dramatic productions and musical performances on the Sir George Williams Campus are staged in the Douglass Burns Clarke Theatre, a modern 380-seat facility in the Henry F. Hall Building.

Specialized studios and workshops for undergraduate and graduate students in the visual arts are located in the Visual Arts Building and the MF Annex.

Music students use ensemble rooms in the Refectory Building on the Loyola Campus, where a number of practice studios of various sizes are maintained. Performances are given in the large ensemble rooms and in the Concert Hall. Dance and theatre students use studios in the TJ Annex, located on the Loyola Campus.

Audio-Visual Facilities

The Audio-Visual Department operates three equipment depots, primarily responsible for media services in teaching areas, but also providing over-the-counter sales of materials and loan of equipment to students, faculty and staff.

The facilities in the Learning Laboratories, media workshops (AVISTAs), television and sound studios, preview and presentation rooms, cinemas and media library, are also available to students, faculty and staff, on an individual basis, for self-instruction, training and the preparation of presentation materials.

Professional production services and consultation are available in the areas of video, sound, graphics, photography, computer controlled presentation and distance education.

The University is a member of the Québec educational television network, CANAL, which broadcasts a variety of credit and non-credit courses, lectures, seminars and interviews on UHF Channel 29 in the Montréal region and on Cable 23 in other areas of Québec.

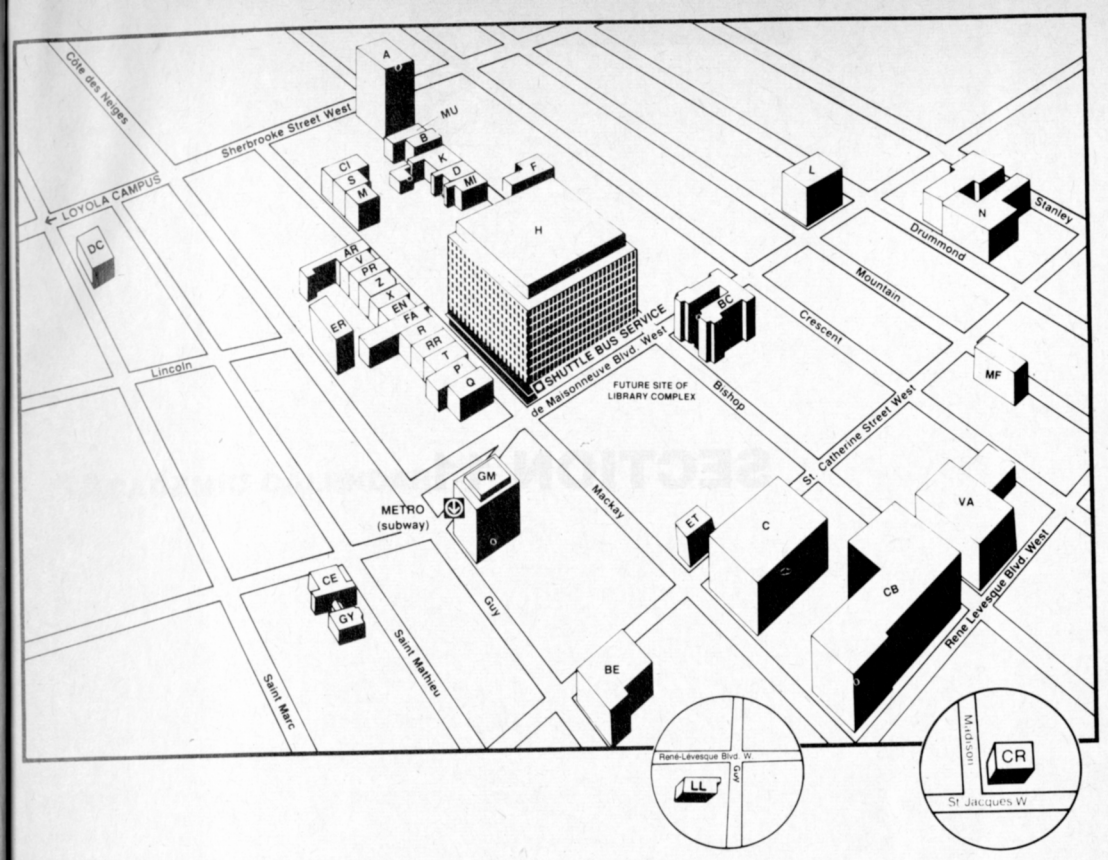
Film

The Montréal Conservatory of Cinematographic Art, established in 1968, houses an important collection of films of historic and cultural value.

The University offers regular programmes of public film screenings in the cinemas on both campuses sponsored by the Conservatory, the Department of Communication Studies and other groups from the University community.

Sports Facilities

The University offers extensive programmes for participation in intramural and intercollegiate sports. Facilities include several full-sized playing fields and a fully-equipped physical education centre on the Loyola Campus. The centre includes a gymnasium and an ice arena, as well as training and sports medicine areas, an activities room and a weight-training room.



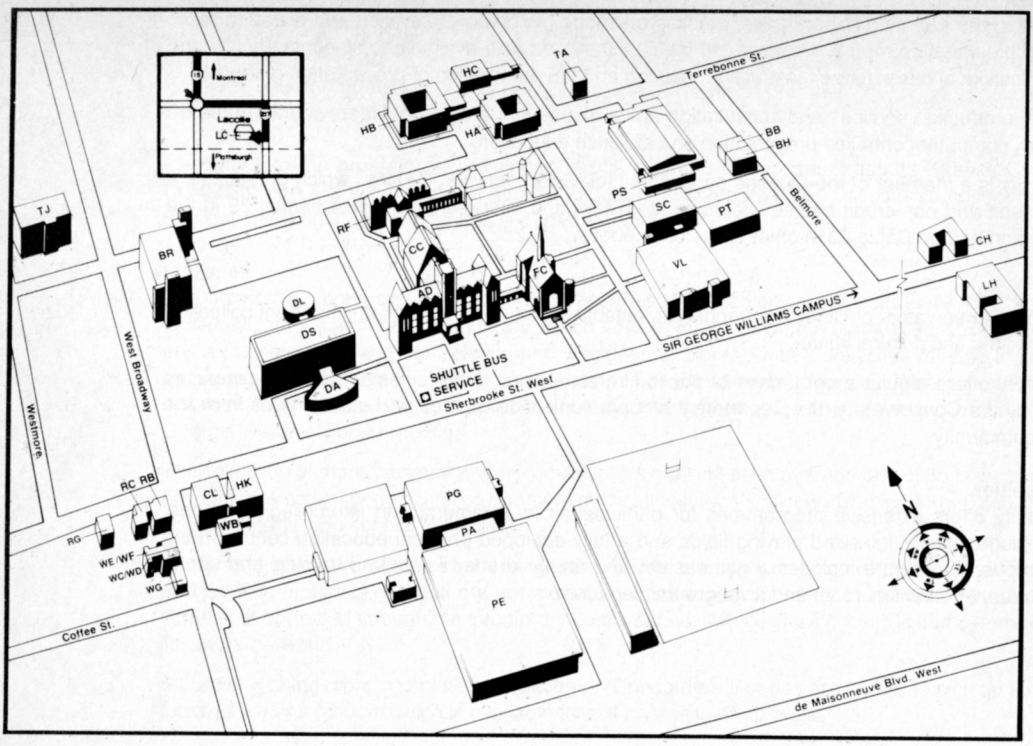
Sir George Williams Campus

BUILDING/ANNEX KEY

A	Annex A	1420 Sherbrooke W.
AR	Annex AR	2130 Mackay
B	Annex B	2160 Bishop
BC	Bishop Court	1463 Bishop
BE	Centre for Building Studies	1257 Guy
C	Annex C	1440 St. Catherine W.
CB	Annex CB	1425 René-Lévesque Blvd. W.
CE	Continuing Education	1822 de Maisonneuve Blvd. W.
CI	Annex CI	2149 Mackay
CR	Annex CR	6277 St. Jacques W.
D	Annex D	2140 Bishop
DC	Daycare	2305 Saint Marc
EN	Annex EN	2070 Mackay
ER	Annex ER	2155 Guy
ET	Annex ET	1401 Mackay
F	Annex F	2085 Bishop
FA	Annex FA	2060 Mackay
GM	Annex GM	1550 de Maisonneuve Blvd. W.
GY	Victoria School	1822 de Maisonneuve Blvd. W.
H	Hall Building	1455 de Maisonneuve Blvd. W.
K	Annex K	2150 Bishop
L	Annex L	2015 Mountain
LL	Annex LL	980 Guy
M	Annex M	2135 Mackay
MF	Annex MF	1230 Mountain
MI	Annex MI	2120 Bishop
MU	Annex MU	2170 Bishop
N	Norris Building	1435 Drummond
P	Annex P	2020 Mackay
PR	Annex PR	2100 Mackay
Q	Annex Q	2010 Mackay
R	Annex R	2050 Mackay
RR	Annex RR	2040 Mackay
S	Annex S	2145 Mackay
T	Annex T	2030 Mackay
V	Annex V	2110 Mackay
VA	Visual Arts Building	1395 René-Lévesque Blvd. W.
X	Annex X	2080 Mackay
Z	Annex Z	2090 Mackay

ALPHABETICAL KEY

Annex A	A	1420 Sherbrooke W.
Annex AR	AR	2130 Mackay
Annex B	B	2160 Bishop
Annex C	C	1440 St. Catherine W.
Annex CB	CB	1425 René-Lévesque Blvd. W.
Annex CI	CI	2149 Mackay
Annex CR	CR	6277 St. Jacques W.
Annex D	D	2140 Bishop
Annex EN	EN	2070 Mackay
Annex ER	ER	2155 Guy
Annex ET	ET	1401 Mackay
Annex F	F	2085 Bishop
Annex FA	FA	2060 Mackay
Annex GM	GM	1550 de Maisonneuve Blvd. W.
Annex K	K	2150 Bishop
Annex L	L	2015 Mountain
Annex LL	LL	980 Guy
Annex M	M	2135 Mackay
Annex MF	MF	1230 Mountain
Annex MI	MI	2120 Bishop
Annex MU	MU	2170 Bishop
Annex P	P	2020 Mackay
Annex PR	PR	2100 Mackay
Annex Q	Q	2010 Mackay
Annex R	R	2050 Mackay
Annex RR	RR	2040 Mackay
Annex S	S	2145 Mackay
Annex T	T	2030 Mackay
Annex V	V	2110 Mackay
Annex X	X	2080 Mackay
Annex Z	Z	2090 Mackay
Bishop Court	BC	1463 Bishop
Centre for Building Studies	BE	1257 Guy
Continuing Education	CE	1822 de Maisonneuve Blvd. W.
Daycare	DC	2305 Saint Marc
Hall Building	H	1455 de Maisonneuve Blvd. W.
Norris Building	N	1435 Drummond
Victoria School	GY	1822 de Maisonneuve Blvd. W.
Visual Arts Building	VA	1395 René-Lévesque Blvd. W.



Loyola Campus

BUILDING/ANNEX KEY

AD	Administration Building	7141 Sherbrooke W.
BB	Belmore Building	3502 Belmore
BH	Belmore House	3500 Belmore
BR	Bryan Building	3475 West Broadway
CC	Central Building	7141 Sherbrooke W.
CH	Centennial Building	6931/37 Sherbrooke W.
CL	Cloran Building	7282 Sherbrooke W.
DA	Drummond Auditorium	7141 Sherbrooke W.
DL	Russell W. Breen Senate Chamber	7141 Sherbrooke W.
DS	Drummond Science	7141 Sherbrooke W.
FC	F.C. Smith Auditorium	7141 Sherbrooke W.
HA	Hingston Hall A	7141 Sherbrooke W.
HB	Hingston Hall B	7141 Sherbrooke W.
HC	Hingston Hall C	7141 Sherbrooke W.
HK	Hackett Building	7270 Sherbrooke W.
LC	Lacolle Centre	Lacolle, Québec
LH	Langley Hall	6900 Sherbrooke W.
PA	Athletics — Admin.	7200 Sherbrooke W.
PB	Athletics — Boiler Rm.	7200 Sherbrooke W.
PE	Athletics — Rink	7200 Sherbrooke W.
PG	Athletics — Gym.	7200 Sherbrooke W.
PS	Physical Services Building	7141 Sherbrooke W.
PT	Concert Hall	7141 Sherbrooke W.
RB	Sherbrooke 3	7300/7302 Sherbrooke W.
RC	Sherbrooke 2	7306/7308 Sherbrooke W.
RF	Refectory Building	7141 Sherbrooke W.
RG	Sherbrooke 1	7328 Sherbrooke W.
SC	Campus Centre	7141 Sherbrooke W.
TA	Annex TA	7079 Terrebonne
TJ	Annex TJ	7315 Terrebonne
VL	Vanier Library	7141 Sherbrooke W.
WA/WB	West Broadway 1	2499/2501 West Broadway
WC/WD	West Broadway 3	2490/2492 West Broadway
WE/WF	West Broadway 2	2494/2496 West Broadway
WG	West Broadway 4	2480 West Broadway

ALPHABETICAL KEY

Annex TA	TA	7079 Terrebonne
Annex TJ	TJ	7315 Terrebonne
Administration Building	AD	7141 Sherbrooke W.
Athletics — Admin.	PA	7200 Sherbrooke W.
Athletics — Boiler Rm.	PB	7200 Sherbrooke W.
Athletics — Gym.	PG	7200 Sherbrooke W.
Athletics — Rink	PE	7200 Sherbrooke W.
Belmore Building	BB	3502 Belmore
Belmore House	BH	3500 Belmore
Bryan Building	BR	3475 West Broadway
Campus Centre	SC	7141 Sherbrooke W.
Centennial Building	CH	6931/37 Sherbrooke W.
Central Building	CC	7141 Sherbrooke W.
Cloran Building	CL	7282 Sherbrooke W.
Concert Hall	PT	7141 Sherbrooke W.
Drummond Auditorium	DA	7141 Sherbrooke W.
Drummond Science	DS	7141 Sherbrooke W.
F.C. Smith Auditorium	FC	7141 Sherbrooke W.
Hackett Building	HK	7270 Sherbrooke W.
Hingston Hall A	HA	7141 Sherbrooke W.
Hingston Hall B	HB	7141 Sherbrooke W.
Hingston Hall C	HC	7141 Sherbrooke W.
Lacolle Centre	LC	Lacolle, Québec
Langley Hall	LH	6900 Sherbrooke W.
Physical Services Building	PS	7141 Sherbrooke W.
Refectory Building	RF	7141 Sherbrooke W.
Russell W. Breen Senate Chamber	DL	7141 Sherbrooke W.
Sherbrooke 1	RG	7328 Sherbrooke W.
Sherbrooke 2	RC	7306/7308 Sherbrooke W.
Sherbrooke 3	RB	7300/7302 Sherbrooke W.
Vanier Library	VL	7141 Sherbrooke W.
West Broadway 1	WA/WB	2499/2501 West Broadway
West Broadway 2	WE/WF	2494/2496 West Broadway
West Broadway 3	WC/WD	2490/2492 West Broadway
West Broadway 4	WG	2480 West Broadway

SECTION 11

ACADEMIC CALENDAR

11 Academic Calendar

The Academic Calendar is subject to change. Updated information will be available from the Registrar's Services Department. For dates pertaining to registration, course changes and final examinations please consult the relevant class schedule or the Registrar's Services Department. Deadlines falling on weekends or holidays will be extended to the next working day. For financial deadlines see §15.

Regular Session — 1991-1992

1991

MARCH	Friday, March 1	Last day for applications to Undergraduate Programmes — Full-time Regular Session 1991-92.
	Friday, March 15	University Writing Test.
	Friday, March 29	Good Friday — University closed. (see April 11, 1991)
APRIL	Monday, April 1	Easter Monday — University closed. (see April 11, 1991)
	Monday, April 1	Last day for submission of late-completion work for courses ending in December 1990 (application deadline February 1).
	Wednesday, April 10	Last day of classes — Regular Session 1990-91.
	Thursday, April 11	Make up day for classes scheduled on Easter weekend — Instructors requested to contact Scheduling Office for room bookings.
	Friday, April 12	Examinations begin.
	Monday, April 29	Examinations end.
MAY	Monday, May 6	See below for Summer Session 1991 calendar.
	Friday, May 24	University Writing Test.
JUNE		Spring Convocations:
	Friday, June 7	Faculty of Arts and Science
	Saturday, June 8	Faculty of Commerce and Administration
	Tuesday, June 11	Faculty of Engineering and Computer Science
	Tuesday, June 11	Faculty of Fine Arts
	Saturday, June 15	Last day to apply for replacement and supplemental examinations for courses taken during the Regular Session 1990-91.
	Saturday, June 15	Last day to apply for re-evaluation of courses taken during the Regular Session 1990-91.
	Saturday, June 15	Last day to apply for late completion of courses ending in April 1991.
JULY	Monday, July 15	Last day to apply for degrees, diplomas and certificates for Fall 1991 graduation.
AUGUST	Thursday, August 1	Last day for submission of late-completion work for courses ending in April 1991 (application deadline June 15).

	Monday, August 12	Replacement and supplemental examinations begin — Regular Session 1990-91.
	Saturday, August 17	Replacement and supplemental examinations end — Regular Session 1990-91.
SEPTEMBER	Monday, September 2	Labour Day — University closed.
	Wednesday, September 4	Classes begin — Day and Evening Regular Session.
	Wednesday, September 4	Course-change period begins for all Fall and Winter courses.
	Friday, September 13	Course-change period ends (tentative).
	Monday, September 16	Last day to apply for replacement and supplemental examinations for courses taken during the Summer Session 1991.
	Wednesday, September 18	Deadline for withdrawal with tuition refund from Two-term and Fall-term courses.
OCTOBER	Tuesday, October 1	Last day to apply for re-evaluation of courses taken during the Summer Session 1991.
	Tuesday, October 1	Last day to apply for late completion of courses taken during the Summer Session 1991.
	Saturday, October 5	Replacement and supplemental examinations for Summer Session 1991.
	Monday, October 7/14	Thanksgiving Day — University closed (see December 4, 1991).
	Friday, October 18	University Writing Test.
	Friday, October 25	Last day for academic withdrawal from Fall-term courses.
NOVEMBER	Friday, November 1	Last day for submission of late-completion work for Summer Session courses 1991 (application deadline October 1).
	Friday, November 1	Last day for applications to Undergraduate Programmes — Winter Term 1991.
	T.B.A.	Fall Convocation.
DECEMBER	Tuesday, December 3	Last day of classes — Fall Term.
	Wednesday, December 4	Make-up day for classes scheduled on Thanksgiving only — Instructors must contact Scheduling Office to book a classroom.
	Friday, December 6	Examinations begin.
	Sunday, December 22	Examinations end.

1992

JANUARY	Monday, January 6	Classes begin — Winter Term.
	Monday, January 6	Course-change period begins for Winter-term courses.
	Tuesday, January 14	Course-change period ends (tentative).
	Wednesday, January 15	Last day to apply for degrees, diplomas and certificates for Spring 1992 graduation.
	Monday, January 20	Deadline for withdrawal with tuition refund from Winter-term courses.

	Friday, January 24	University Writing Test.
	Friday, January 24	Last day to apply for replacement and supplemental examinations for courses ending in December 1991 (Graduating Students only).
FEBRUARY	Saturday, February 1	Last day to apply for re-evaluation of courses ending in December 1991.
	Saturday, February 1	Last day to apply for late completion of courses ending in December 1991.
	Saturday, February 8	Replacement and supplemental examinations for courses ending in December 1991 (Graduating Students only).
	Monday, February 24	Mid-term break begins.
	Friday, February 28	Last day for academic withdrawal from two-term courses and Winter-term courses.
	Friday, February 28	Rector's Holiday — University closed
	Friday, February 28	Mid-term break ends.
MARCH	Sunday, March 1	Last day for applications to Undergraduate Programmes — Full-time Regular Session 1992-93.
	Friday, March 13	University Writing Test.
APRIL	Wednesday, April 1	Last day for the submission of late-completion work for courses ending December 1991 (application deadline February 1).
	Friday, April 10	Last day of classes — Regular Session 1991-92.
	Friday, April 10	Examinations begin.
	Saturday, April 11	Make up day for classes scheduled on Easter weekend — Instructors requested to contact Scheduling Office for room bookings.
	Friday, April 17	Good Friday — University closed
	Monday, April 20	Easter Monday — University closed
MAY	Sunday, May 3	Examinations end.
JUNE	T.B.A.	Spring Convocations.

NOTE: For the information of instructors planning assignment deadlines, class tests, etc., and for persons scheduling meetings, the dates of the major Jewish Holy Days are set out below:

Rosh Hashanah	Monday, September 9 and Tuesday, September 10, 1991.
Yom Kippur	Wednesday, September 18, 1991.
Sukkot	Monday, September 23 and Tuesday, September 24, 1991. Monday, September 30 and Tuesday, October 1, 1991.
Passover	Saturday, March 30 and Sunday, March 31, 1991. Friday, April 5 and Saturday, April 6, 1991. Saturday, April 18 and Sunday, April 19, 1992. Friday, April 24 and Saturday, April 25, 1992.

Observance of the Holy Day commences on the preceding evening at Sunset.

Summer Session — 1991 (Day and Evening Classes)

MAY	Monday, May 6	Two-term and First-term Summer Session begins.
	Monday, May 20	Victoria Day — University closed.
JUNE	Wednesday, June 12	First-term Summer Session ends.
	Thursday, June 13 — Monday, June 17	Mid-term Break and First-term Summer Session examination period.
	Tuesday, June 18	Last day of mid-term break.
	Wednesday, June 19	Second-term Summer Session begins.
	Monday, June 24	Fête Nationale — University closed.
JULY	Monday, July 1	Canada Day — University Closed.
AUGUST	Wednesday, July 31	Two-term and Second-term Summer Session ends.
	Thursday, August 1 — Wednesday August 7	Two-term and Second-term Summer Session examination period.

Special Six-Week Summer Session — 1991 (Day Classes Only)

JULY	Tuesday, July 2	Session begins.
AUGUST	Monday, August 12	Session ends.

SECTION 12

ADMINISTRATION

12 Administration

The following information was updated as of November 1, 1990.

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13 Admission Regulations

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Associate Director of Admissions
LYNNE PRENDERGAST

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CATHERINE HIRST
LINDA HULL
LINDA MACDONALD
BRUCE MACKENZIE

Administrative Assistant to the Director
LIANA HOWES

Admissions Interviewers
ASSUNTA FARGNOLI
VIVIEN FREEDMAN
EDITH MALIK

Office Manager
VIRGINIA BRUCE

Admissions Office
Loyola Campus
7141 Sherbrooke Street West
Montréal, Québec
H4B 1R6
848-2668

The office is located at: AD-211

Admissions Office
Sir George Williams Campus
1455 de Maisonneuve Blvd. West
Montréal, Québec
H3G 1M8
848-2668

The office is located at: Room 105
1435 Drummond Street
Montréal

Liaison Office
Concordia University
Director
PETER REGIMBALD

Liaison Officers
CRAIG BROWN
DAVID DOBROFSKY
JOANNE OBERG-MUELLER

Graduate Students
Graduate Studies Office
1455 de Maisonneuve Blvd. West
Montréal, Québec
H3G 1M8
848-3800

The office is located at:
Room S205
2145 MacKay Street
Montréal

13.1 Admission to Concordia University

In keeping with the general principles accepted by Québec universities, the policy of Concordia University is that admission is open to any qualified applicants in the programme of their choice, within the limits of its resources.

In the case of programmes where demand is heavy, available resources may make it necessary to limit the number of persons admitted. This means that there will, regrettably, be cases where qualified applicants must be refused. In such cases the University will accept those applicants who have the best qualifications and demonstrated potential. Concordia has a long tradition of service to adult and part-time clienteles and this service remains a vital part of its mission.

The University undertakes to give fair consideration to all applications and to inform the applicant of its decisions and the basis for them within a reasonable period of time.

Full information on admission requirements and procedures will be found in this calendar, and in various other publications such as the Admissions Guide.

The University maintains admissions offices on both of its campuses. The offices will provide application forms, as well as information about requirements and procedures. There is, however, only one centre for the processing of applications. All applications and supporting documents should be mailed to:

Concordia University
Admissions Application Centre
P.O. Box 2900
Montréal, Québec, H3G 2S2

Qualified applicants not admitted to their preferred programme because of enrolment limits will be considered for their second choice immediately.

Applicants wishing to change Faculty should call or write the Admissions Office; they are not required to complete a second form.

13.2 Definitions

1. The University Year
The University year is made up of a *Regular Session* and a *Summer Session*. The Regular Session is made up of a *Fall Term* (September-December) and a *Winter Term* (January-April). The Summer Session is made up of a *Twelve-week term* (May-July) and a *Six-week term* (July-mid-August).

2. Undergraduates
Students registered in a bachelor's degree or in a certificate programme, whether on a full-time or part-time basis. *Full-time* students are those registered for 24 credits or more in the Regular Session (or 12 credits or more in either the Fall or Winter term with none in the other term); *part-time* students are those registered for fewer than 24 credits in the Regular Session (or fewer than 12 credits in either the Fall or Winter term).

3. Certificate Students
Students registered in a certificate programme, whether on a full-time or part-time basis (see §16.2.10).

4. Mature Students
Undergraduates who have not met the regular academic admission requirements, but have been admitted on the basis of age, experience and potential (see §14). Mature students may study on a full-time or part-time basis.

5. Extended Credit Programme Students
Students registered in an extended programme, normally requiring a minimum of 120 credits, designed for students entering from secondary institutions outside Québec. (See relevant Faculty section.)

6. Visiting Students
Undergraduate students from other universities who have written approval from their home university to take courses at Concordia University, or students currently registered in certain certificate programmes sponsored by external associations (e.g. programmes in the Faculty of Commerce and Administration). (See §13.10)

7. Independent Students
Students not seeking a degree or certificate (see §13.11).

8. Residence Requirement
The minimum number of credits which must be taken at Concordia University to obtain a degree or certificate awarded by the University (see §16.1.5).

13.3 Faculties and Degrees

FACULTY OF ARTS AND SCIENCE—§31
Bachelor of Arts (BA)
Bachelor of Education (BEd)
Bachelor of Science (BSc)

FACULTY OF COMMERCE AND ADMINISTRATION—§61
Bachelor of Administration (BAdmin)
Bachelor of Commerce (BComm)

FACULTY OF ENGINEERING AND COMPUTER SCIENCE—§71
Bachelor of Computer Science (BCompSc)
Bachelor of Engineering (BEng)

FACULTY OF FINE ARTS—§81
Bachelor of Fine Arts (BFA)

Bachelor's degrees, other than the Bachelor of Engineering, normally require successful completion of 90 credits, or 108 credits in the case of mature students (see §14), or 120 credits in the case of students admitted to the Extended Credit Programme (See §13.2 for definition and appropriate Faculty section for details on requirements.) (See §16.1.2 for the definition of credit.) For students registered full time, 30 credits constitute the normal workload in the Regular (Fall/Winter) Session. The number of credits required for the degree of Bachelor of Engineering varies according to the option chosen and the previous preparation of the student, but is usually no less than 115 (see §71). Information regarding the normal work load in the Regular Session in the Faculty of Engineering and Computer Science is specified in the Faculty's Programme Guide.

13.4 Admission Requirements

13.4.1 APPLICANTS FROM QUÉBEC INSTITUTIONS

Successful completion of a two-year pre-university programme in a CEGEP, with the award of a Diploma of Collegial Studies (DEC) (or the equivalent), including the specific courses required by the various programmes ("profil"). These "profils" are listed in the Department of Education booklet "Accueil 91—Structures d'accueil aux études universitaires de premier cycle". For the convenience of applicants, requirements are listed in the various Faculty sections of this calendar. Applicants who have completed a professional programme in a CEGEP are also admissible to the University. Students who complete a French Baccalauréat are also considered for admission to the first year of an undergraduate programme. Students admitted to a particular programme at the University and who subsequently wish to change to another programme may have to complete specific prerequisites in addition to their regular programme requirements.

13.4.2 APPLICANTS FROM OTHER CANADIAN PROVINCES

Students from provinces and territories other than Québec who have completed the final year of high school in academic subjects appropriate to the degree programme which they wish to enter may be considered for admission to the first year of the Extended Credit Programme (ECP). The Extended Credit Programme is designed for graduates of secondary schools outside Québec and requires completion of 30 credits in addition to the regular 90-credit (three-year) degree programme (120 credits in total). While the duration of a degree programme is normally four years, the Bachelor of Engineering degree will, in general, require five years of full-time study to complete.

While no set pattern of high school courses is required, the courses presented should be appropriate for the degree programme sought. A minimum overall average of 65% is required in academic subjects taken in the final year. Higher averages may be required for admission to individual programmes in which the demand for places by qualified applicants exceeds the number of places available in those programmes. Students completing the following levels of education may be considered for entry to the Extended Credit Programme.

Ontario

Applicants must present the Secondary School Honour Graduate Diploma (SSHGD) or the Ontario Secondary School Diploma (OSSD) with a minimum overall average of 65% in six appropriate Honour Graduation Courses or Ontario Academic Courses (OACs). The SSHGD and the OSSD will be given equal consideration for admission purposes.

Students entering programmes in the Faculty of Arts and Science or the Faculty of Fine Arts will be awarded six credits for each Grade 13 or OAC course in the humanities or social sciences with a minimum passing grade of 70%, up to a maximum of 30 credits. The policy regarding the awarding of credits is subject to review on an annual basis.

Other Provinces

Alberta and Northwest Territories	Grade 12
British Columbia and the Yukon	Grade 12
Manitoba	Grade 12
New Brunswick	Grade 12
Newfoundland	Grade 12
Nova Scotia	Grade 12
Prince Edward Island	Grade 12
Saskatchewan	Grade 12

13.4.3 TRANSFERS FROM OTHER UNIVERSITIES

Transfer applications are considered individually, on their merits. Applicants transferring from other accredited universities will be considered for an appropriate level of placement within the undergraduate programme at this University. (For Engineering see §13.3). There are some special conditions attached to the granting of transfer credits.

The number of credits awarded depends on the character, quality and quantity of the work completed. Applicants who have attended another university and wish to transfer to an undergraduate programme at Concordia should understand the following conditions:

1. Students will not be given credit for courses taken in another university during the same academic term in which they have registered for courses at Concordia University, unless special permission has been obtained in advance from this University. The Admissions Office should be contacted for information on the correct procedure.
2. Students currently registered at this University wishing to take a course at another university during a different academic term—for example, the Summer—must get prior approval. The Admissions Office should be contacted for information on the correct procedure.
3. Students may not apply transfer credits towards the residence requirements at the University (as set out in the following paragraph) unless special permission has been obtained from the appropriate Faculty Council.
4. Out of the total number of credits required for a bachelor's degree, a minimum of 45 credits must be taken at Concordia University for all bachelor's degrees except that of the Bachelor of Engineering, where the minimum is 60 credits. Unless otherwise authorized by the Faculty to which the student has been admitted, these will be the *last* 45 credits (or the *last* 60 in the case of the Bachelor of Engineering).
5. The proportion of degree credits which must be taken at Concordia University in honours, specializations, majors, minors or other elements of concentration will be determined by individual Faculties but should be not less than 50%.
6. The Admissions Office, in consultation with the four Faculties, is responsible for the processing of pro-tanto credits.

13.4.4 TRANSFERS FROM OTHER POST-SECONDARY INSTITUTIONS

Credits obtained in junior colleges, community colleges, or Colleges of Applied Arts and Technology outside Québec will, in general, be given the same recognition towards undergraduate programmes as they would receive in their respective province.

13.4.5 EXEMPTIONS AND PRO-TANTO CREDITS

The award of "pro-tanto credits" means that a course previously taken in another institution, or, in some cases, in another type of Concordia programme, is being counted towards a Concordia degree programme, or programme of concentration within that degree programme. Pro-tanto credits are normally

specific (e.g. pro-tanto credit for Concordia course "x" is given for course "y" taken at another university) but they may be general, where the work done elsewhere is a valid part of an individual student's programme but does not correspond exactly to Concordia divisions of course content.
"Exemption" covers any case where it is recognized that a student has in one way or another covered the work of a course required in a Concordia programme, with an appropriate level of performance. In such cases students will replace the course from which they have been exempted with another course. Faculty or departmental regulations will indicate the nature of the replacement course—for example, another course in the same field, a restricted elective (e.g., "six credits in history or political science") or an open elective.

13.4.6 APPLICANTS FROM OUTSIDE CANADA

Academic qualifications presented by Canadian students applying from institutions outside Canada should be comparable to those expected of students applying from within Canada.
International applicants from institutions outside Canada are referred to §13.12.

13.5 Application For Admission

It is recommended that application for admission be made as early as possible on forms provided by the Admissions Office. Academic certificates and other supporting documents not available at the time of application must be submitted as soon as they become available. (Applicants enrolled in a CEGEP should refer to §13.6.1.) Arrangements should be made with the institution concerned to send directly any university transcripts, or where applicable, CEGEP transcripts. Where it is required, applicants will provide an official high school transcript showing courses and grades. Applicants who submit a certificate in a language other than English or French should attach a certified translation into either English or French. If the certificate does not detail the subjects taken and the grades achieved, a certified statement of these from an authorized official of the institution should also be appended.
Applicants are advised to apply early in order to allow sufficient time for evaluation and review of their applications by the Admissions Office.

13.5.1 APPLICATION FEE

An application must be accompanied by an application fee of $15 (Canadian), payable by certified cheque or money order to Concordia University. It is not refundable under any circumstances nor will it be applied towards tuition fees. This fee is not transferable to a session other than that to which the student has applied. Applications not accompanied by a certified cheque or money order of $15.00 will not be processed.

13.5.2 APPLICATION DEADLINE DATES

Full-Time
March 1 and November 1 are the application deadline dates normally set for the Fall and Winter terms respectively. Late applications are considered wherever appropriate. Further information can be obtained from the Admissions Office.

Part-Time
Applications should be submitted well before the start of term to allow sufficient time for evaluation and notification. Candidates for the Fall and Winter terms should apply before July 15 and November 1. Final dates for the receipt of applications can be obtained from the Admissions Office.

N.B.: Part-time applicants to the Faculty of Fine Arts should apply before March 1.
Full-time or part-time applicants for entry to the Summer Session should contact the Admissions Office for information on deadlines.

13.5.3 ENTRY DATES

September is the normal point of entry to full-time and part-time studies. Entry in January or in the Summer Session is limited to certain programmes only. In some cases, entry in January may require the completion of courses in the subsequent Summer Session.
The normal entry date for International students is September.

13.5.4 JANUARY ADMISSION

New students are admitted in January where places are available. It should be noted that not all programmes are offered for the January Session. Admission in January has been introduced primarily to accommodate December graduates of Québec CEGEPs, but is not restricted to this group.
The normal course load in the Winter Term (January-April) is 15 credits. Up to a maximum of 12 credits may be taken in the Summer Session. In some cases, January entrants are required to take summer courses.
International students, other than those applying from CEGEP, are admitted in January in exceptional cases only.

13.5.5 ADMISSION DEPOSIT

Applicants who have been granted admission to full-time studies and to certain high-demand part-time programmes are required to submit a cheque or money order for $50 (Canadian) to confirm their intention to enter the University. This admission deposit is non-refundable, but will be applied towards tuition fees at the University.

Applicants who receive an early conditional acceptance, but who are subsequently refused admission because they have not completed the minimum academic requirements for entrance, will have their admission deposit refunded.

13.6 Required Documents

13.6.1 CEGEP APPLICANTS

All applicants should submit, at the time of application, or as soon thereafter as possible, a student copy of their CEGEP transcript. This transcript should show their record to date, including grades for all courses followed during the previous terms. In addition, there should be an accompanying list of courses in progress. Applicants are responsible for ensuring that the student copy is both accurate and complete.

1. *Currently Enrolled CEGEP Students*

In the case of applicants currently enrolled in a CEGEP, the University will obtain their most recent CEGEP record of study (the results of the previous terms, together with a list of courses being followed during the final term) from CREPUQ, (Conférence des recteurs et des principaux des universités du Québec). The CEGEP records will be acquired on one of several scheduled dates. Applicants should therefore complete the application forms as early as possible in order to avoid delay in the transfer of the CEGEP record. The "code permanent", which is the educational code number for Québec students, must be correctly entered on the application form as this identification number is used to obtain the CEGEP transcript. A copy of the computerized CEGEP record will be issued to the applicant for verification.

Final transcripts are obtained by the Admissions Office as soon as they are available.

2. *Former CEGEP students*

Former CEGEP students who are not attending CEGEP because they have graduated or have discontinued their CEGEP studies must arrange for their former CEGEP to send the transcript of their grades directly to the Admissions Application Centre.

13.6.2 OTHER APPLICANTS

All secondary and post-secondary scholastic records must be submitted. It is your responsibility to ensure that an official copy of your transcript, in English or French, is forwarded directly to the Admissions Application Centre by the institution which you previously attended and/or at which you are currently registered. (Although your records from several institutions may be summarized on one transcript, an application will not be considered until an official transcript from EACH institution attended has been received. These are required even though no credit may have been earned.)

If you are currently enrolled at an institution, you must also submit the results of previous terms together with a list of courses in which you are currently registered. An official transcript which includes the results of the final semester must be forwarded as soon as possible. All documents must be originals or appropriately certified copies. Uncertified copies are not acceptable.

It should be noted that scholastic records submitted by fax will not be considered as official transcripts.

If you submit certificates in a language other than English or French you must also attach a notarized translation into either English or French. If the certificate does not detail the subjects taken and the grades achieved, a certified statement of these from an authorized official of the institution should also be appended.

13.6.3 OTHER DOCUMENTS

Canadian Citizens/Permanent Residents (Landed Immigrants) are required to provide documentary proof of their status in Canada. Applicants who have been accepted by the University and who have not provided this proof of status will automatically be charged the higher international tuition fees. To provide proof of Canadian Citizen/Permanent Resident (Landed Immigrant) status you must submit a photostatic copy to the Admissions Office of *one* of the following documents:

Canadian Birth Certificate
Canadian Baptismal Certificate,
(indicating place of birth)
Citizenship or Permanent Resident
(Landed Immigrant) papers
Canadian Passport; Affidavit

The following documents are *not* considered acceptable:

Driver's Licence
Medicare card
Social Insurance Number card

13.6.4 ALL APPLICANTS

Applicants are required to declare and submit all pertinent academic records when applying for admission. Applicants who have failed to disclose an academic record at the time of application may have their acceptance or registration cancelled. Academic records undeclared at the point of application and subsequently submitted will not be used to upgrade a student's placement level.

13.7 Language Proficiency

All students entering bachelor's degree programmes must give proof of acceptable writing skills as a condition of graduation. The only exceptions are those already tested prior to admission (see below). The graduation requirement may be met either by passing the University Writing Test or by obtaining a specific grade in a designated language course (see §16.2.11).

The language of instruction at Concordia is English, with a few specific exceptions, but assignments and examinations, again with a few exceptions, may be submitted in French. The graduation requirement may therefore be satisfied in either English or French.

Applicants whose first language is neither English nor French and who fall into the following categories must also pass the University Writing Test or obtain a specific grade in a designated language course:

1. Applicants holding a Québec Diploma of Collegial Studies, or the equivalent, from an English- or French-language system.
2. Applicants who have obtained an "O"-level pass in English language in the General Certificate of Education, or the equivalent.
3. Applicants for Mature Entry or for admission to the Extended Credit Programme who have taken the last two years of full-time schooling in an English- or French-language system. The Admissions Office reserves the right to resolve any doubtful cases arising from the nature of such schooling.

Other applicants whose first language is neither English nor French must demonstrate their proficiency in English for admission purposes and must be tested in *English* writing skills prior to the point of entry by taking one of the following:

1. Concordia English Language Diagnostic Test

a) Persons applying from within the Montréal area who are required to write an English language test will automatically be scheduled to sit for the Concordia English Language Diagnostic Test upon making application to the University.

b) An application will not be considered complete until these test results have been received.

c) A testing fee of $20.00 is required of all who write the Concordia English Language Diagnostic Test. Further information concerning the payment of this fee will be provided when applicants are scheduled to write the test.

2. Test of English as a Foreign Language (TOEFL) *or* **The University of Michigan English Language Test**

(For applicants from outside the Montréal area)

These tests are administered in most countries of the world. It is the responsibility of the applicant to write directly to the appropriate address listed below for the necessary application forms and information.

Test of English as a Foreign Language
Educational Testing Service
Box 6154
Princeton, New Jersey 08541-6154
U.S.A.

English Language Institute
Testing and Certification
The University of Michigan
2011B North University Bldg.
Ann Arbor, Michigan 48109
U.S.A.

REPORTING OF TOEFL OR UNIVERSITY OF MICHIGAN TEST RESULTS

a) To ensure that your TOEFL results are forwarded directly to Concordia University, you must indicate the "Institution Code" at the time of writing the test: 0956.

b) The results must be reported directly to the Admissions Office by the TOEFL or University of Michigan Test Centre. Candidate copies of results or results that are more than two years old at point of review will not be acceptable as proof of language proficiency.

c) An application will not be considered before the test results have been received. Applicants should therefore contact the TOEFL or University of Michigan Test Centres as soon as possible in order that the date of receipt of test results does not delay or prevent consideration of their application.

Applicants attaining the prescribed level in one of the above tests will be considered to have met the graduation requirement. Those otherwise admissible but who have attained a lower but marginally acceptable level will be required to take specific courses in English as a Second Language (ESL). In the latter case, the required ESL courses will be indicated in the letter of acceptance, and successful completion of ESL 209 with a grade of C- or better will satisfy the graduation requirement.

13.8 Selection Process and Notification

Admission to undergraduate studies is based on a careful review of all credentials presented on behalf of a candidate. An application for admission is not given final consideration until all the required items have been submitted. However, the University does have an early conditional admission plan (see below). The University reserves the right to refuse admission to or registration in a particular programme even when the stated requirements for entrance have been satisfied.

13.8.1 EARLY CONDITIONAL ADMISSION

Applicants seeking admission to undergraduate programmes may be granted conditional acceptance on the basis of former records of study. Such records should include mid-year results for the current year. Final admission is contingent upon successful completion of the final term or semester of study and

satisfaction of the prescribed academic admission requirements. Candidates granted early conditional admission are in general notified before May 15.

13.8.2 LIMITED ENROLMENT

In some programmes the number of qualified applicants may exceed the number of places available. Possession of the stated requirements does not in itself guarantee admission to a particular programme.

13.9 Mature Entry

Information on Mature Entry will be found in §14.

13.10 Admission as a Visiting Student

Persons in the categories listed below may apply for Visiting Student status by contacting the Registrar's Services Department. In no case can students so admitted be guaranteed a place in a given course.

1. Students currently registered in certain certificate programmes sponsored by external associations (e.g. programmes in the Faculty of Commerce and Administration). Documentation: proof of membership in the association and citizenship documents. (See §13.6.3)
2. Undergraduate students from other universities who have written approval from their home university to take courses at Concordia University. Documentation: a letter from the Registrar of the home university and citizenship documents (See §13.6.3) or Student Visa.

13.11 Admission as an Independent Student

Persons wishing to take individual courses without committing themselves to a degree or certificate programme may register, if qualified, as Independent students, provided that they are Canadian Citizens, Permanent Residents (Landed Immigrants) or holders of a diplomatic visa. Independent students register for courses once all undergraduate students have selected their courses. In no case can an Independent student be guaranteed a place in a given course. Persons should apply for Independent student status by contacting the Admissions Office. They should bring with them evidence of having met university entrance requirements and citizenship documents. (See §13.6.3.) This evidence will be evaluated by the Admissions Office. There are two categories of Independent student:

1. those meeting regular admission requirements.
2. those meeting Mature Entry age requirements (see §14), and who can satisfy the University that they have, through other experiences, acquired the necessary background for the course(s) for which they wish to register.

NOTE: Independent students must satisfy the University that they have completed prerequisite courses where required.

Independent students wishing to subsequently enter a degree or certificate programme must apply to the Admissions Office. Credits acquired by Independent students may subsequently be applied towards a degree or certificate if appropriate. In the case of the Faculty of Arts and Science, an Independent student may apply a maximum of 30 credits towards a degree.

Please refer to §16.1.4 for course load regulations which apply to Independent students.

13.12 Information of Special Interest to International Students

13.12.1 APPLICATION FEE

International applicants must include a $15 application fee payable by International money order or draft drawn on a Canadian Bank in Canadian funds to Concordia University.

13.12.2 ADMISSION REQUIREMENTS

Candidates applying from other countries who have achieved university admission level will be considered for admission provided that better than average grades have been attained. In most cases, a specific minimum overall standard on certificates is required. The school-leaving courses presented should be appropriate for the degree programme to which application has been made. Some programmes have additional requirements, e.g. audition, interview, portfolio. Since entry to many programmes is limited, the satisfaction of minimum requirements does not guarantee entry to the University. More specific information with respect to admission requirements and placement levels may be obtained by writing to the Admissions Office.

Depending on the particular certificate, applicants are considered for entry to three-year (90 credits) or four-year (120 credits) degree programmes. The number of credits required for the Bachelor of Engineering Degree varies according to the option chosen and the previous preparation of the student, but is usually no less than 115.

United Kingdom and Commonwealth

Passes awarded in the examinations for the General Certificate of Education, The Cambridge Overseas and Higher School Certificates, The West African School Certificates, General Certificate of Education, or the equivalent, will be considered as satisfying the general entrance requirements if the conditions of either Scheme A or Scheme B are satisfied.

Scheme A: Passes in five subjects of which at least two must be passed at the Advanced Level (G.C.E.) or Principal Level (C.O.H.S.C.), and three at the Ordinary Level or the School Certificate Level.

Scheme B: Passes in four subjects of which at least three must be passed at the Advanced Level (G.C.E.) or Principal Level (C.O.H.S.C.), and one at the Ordinary Level or the School Certificate Level.

Some additional information attached to the fulfilment of the above schemes:
a) An average grade of D or better in Advanced or Principal Level subjects is normally expected. In the case of certain quota programmes where enrolment is limited, candidates will have to present higher grades in order to compete successfully for places at the University.
b) Two appropriate AS (Advanced Supplementary) Levels may be accepted in lieu of an Advanced Level for the purposes of satisfying the general entrance requirements of the University.

Some programmes have specific subject requirements. These have been outlined below. The following indicates, by degree, which Advanced or Principal Level subjects are required.

BAdmin, BComm, BSc—Mathematics and one other acceptable subject

BA, BEd, BFA—Any two acceptable subjects

BEng—Mathematics and Physics

BCompSc

General Science—Mathematics and Physics
Information Systems—Mathematics and any other acceptable subject
Software Systems—Mathematics and Physics
Systems Architecture—Mathematics and Physics
Theoretical Computer Science—Mathematics and Physics

Students who have not written Advanced or Principal Level examinations but who have good grades in at least five appropriate Ordinary Level or School Certificate Level subjects plus one year of formal schooling beyond Ordinary Level, in a suitable academic programme in a recognized school or college, may be considered for admission to an undergraduate programme requiring the completion of 120 credits (four years). In the case of the Bachelor of Engineering the programme would require four to five years.
Applicants to an extended undergraduate programme in Engineering or Science are normally expected to have mathematics and at least one science subject; those applying to Commerce and Administration are advised to have mathematics as part of their entrance qualifications.
Content of additional credits will be found in the appropriate Faculty section of this calendar.

13.12.3 UNITED STATES

High School graduates with high standards from accredited schools who have followed an academic programme designed for university entrance may apply for admission to an extended undergraduate programme of approximately 120 credits.
Applicants are required to have a better than average school record and high ranking in their graduating class. While no set pattern of courses in high school is required all applicants are expected to have taken four units of English. Those applying for admission to Science and Engineering must include three or four units in mathematics and two in the sciences. At least three units of mathematics are recommended for admission to Commerce and Administration.
Students who have successfully passed Advanced Placement examinations in appropriate subjects with a grade of "3" or better may be granted some advanced standing.

13.12.4 FRANCE

Students who have completed the requirements for the Baccalauréat with satisfactory results may be considered for admission to an undergraduate programme requiring the completion of 90 credits (three years).
The number of credits required for the Bachelor of Engineering varies according to the option chosen and to the previous preparation of the student, but is usually no less than 115.
In cases where the Baccalauréat specialization (series) followed does not fully satisfy the entrance course requirements for the degree programme sought, the student, if admitted, will have to include the designated prerequisites as part of the first year programme. In some instances, the prerequisites must be taken in addition to the undergraduate programme.

13.12.5 TRANSFERS FROM POST-SECONDARY INSTITUTIONS

Transfers from post-secondary institutions are referred to §13.4.3.

13.12.6 OTHER COUNTRIES

Candidates applying from other countries who have achieved university admission level will be considered for admission provided that better than average grades have been attained. In most cases, a specific minimum overall standard on certificates is required. More specific information with respect to admission requirements and placement levels may be obtained by writing to the Admissions Office.

13.12.7 INTERNATIONAL BACCALAUREATE

IB Diploma candidates who achieve passes in six subjects with three at the Higher level and who obtain a minimum total of 27 points may be considered for admission to the regular undergraduate programmes of study.

13.12.8 LANGUAGE PROFICIENCY

The language of instruction at Concordia University is English. For information regarding this requirement refer to §13.7

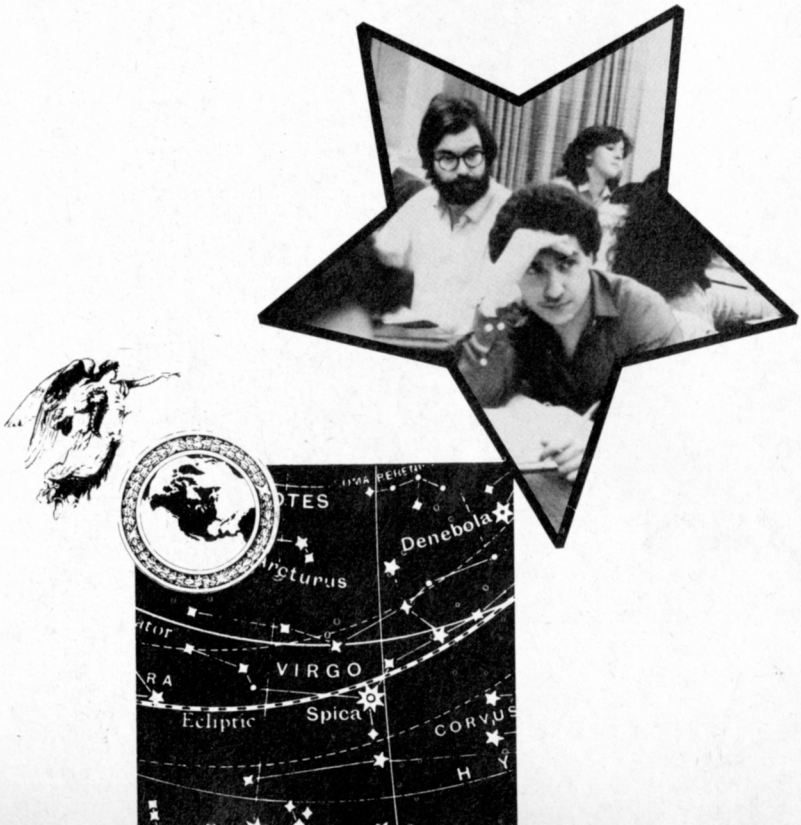
13.12.9 CRITERIA FOR ADMISSION

Admission to Concordia University is selective and will be considered when all relevant academic certificates have been received, as well as the Summary of Educational Experience form.
All certificates must show the actual grade obtained in each examination.

13.12.10 REGISTRATION

Regular registration for the September and January terms normally takes place in mid-August and mid-December respectively. For those students entering in September who live within reasonable travelling distance of the University, early registration is also possible. International students must enrol on the dates indicated in their letter of acceptance. Late registration is not normally permitted. Complete information regarding registration is sent with the letter of acceptance.

SECTION 14



MATURE ENTRY

14.1 GENERAL INFORMATION

14.2 CENTRE FOR MATURE STUDENTS

14.3 ADMISSION AS A MATURE STUDENT

14.4 PROGRAMME REQUIREMENTS
14.4.1 Faculty of Arts and Science
14.4.2 Faculty of Commerce and Administration
14.4.3 Faculty of Engineering and Computer Science
14.4.4 Faculty of Fine Arts

14.5 CHOICE OF ELECTIVES

14.6 PROGRAMMES OF STUDY FOR SENIOR STUDENTS
14.6.1 Senior Scholarships

14 Mature Entry

14.1 General Information

Concordia has for many years made it possible for men and women of 21 years of age or over to undertake work towards university degrees and certificates, although they lack the normally required pre-university schooling.

Mature entrants are expected to demonstrate the potential to follow undergraduate courses, and are required to complete successfully additional credits over and above those required of students who enter with the regular qualifications. Mature entrants are, however, considered and treated in every way as undergraduates.

Normally, mature entrants without any CEGEP or equivalent must complete at least 18 additional credits of preparatory or complimentary courses. Mature entrants with partial CEGEP or equivalent must complete up to 18 additional credits. These additional credits are designed with a view to making it possible for mature entrants to make the best use of the studies which they subsequently undertake.

Within these 18 initial credits a maximum of six credits may be counted towards the student's eventual concentration (honours, major, etc.).

Requirements are set by each individual Faculty, in terms of the programme to be undertaken (see below, §14.4)

Students should also see §13.7 of this Calendar regarding Language Proficiency Testing.

14.2 Centre for Mature Students

Director
MARY BRIAN, *Associate Professor, Mathematics*

Associate Director
BRUCE ENGLISH, *Associate Professor, Finance*

Fellows
BRYAN BARBIERI, *Associate Professor, Marketing*
LAWRENCE BOYLE, *Associate Professor, Finance*
RICHARD T. CRONIN, s.j., *Associate Professor, Biology*
RICHARD GUY, *Associate Professor, Centre for Building Studies*
W. RON HOOPER, *Associate Professor, Psychology*
HERBERT HORWICH, *Associate Professor, Sociology*
ANNE MARIE KETTER, *Associate Professor, Modern Languages and Linguistics*
E. BRIAN MARKLAND, *Associate Professor, Accountancy*
JOHN MILLER, *Sessional Lecturer, English*
DAN OTCHERE, *Associate Professor, Economics*
GILBERT C. TAGGART, *Professor, Études françaises*

Associate Fellows
DIANE ADKINS, *Counsellor, Guidance Services*
LESLIE BECSKEI, *Coordinator, Academic Programming, Engineering and Computer Science*
LYNNE CAMPBELL, *Director of Examinations, Registrar's Office*
RIVA HEFT, *Director, Adult Education*
RICHARD McDONALD, *Professor, Applied Social Science*
SHIRLEY McLEOD, *Student Affairs Adviser, Fine Arts*
PETER REGIMBALD, *Director, Liaison*
MATTHEW SANTATERESA, *Academic Adviser, Arts and Science*
RICHARD A. SMITH, *Associate Professor, Education; Director, Learning Development*
MAUREEN STACY, *Undergraduate Student Affairs, Commerce and Administration*
THOMAS E. SWIFT, *Director, Admissions*
MARY TARLTON, *Director of Registration and Academic Scheduling, Registrar's Office*
JOANN WELSH, *Academic Adviser, Arts and Science*
ROLAND WILLS, *Associate Dean, Commerce and Administration*

To advise and assist both prospective and enrolled students in dealing with academic requirements and other problems, the University maintains a Centre for Mature Students with offices and facilities on both campuses.

The primary aim of the Centre for Mature Students is to develop services for students returning to formal studies after an absence of many years.

To carry out its goals and functions, the Centre has a home base on each campus. On staff, you will find advisers qualified to help guide you with course selections or if you encounter problems of an academic or administrative nature.

The Centre has Fellows chosen from a cross-section of faculty members especially interested in the problems encountered by adults working towards a degree. Fellows of the Centre will be on hand at appointed times to offer advice and information on such matters as the choice of initial courses at the outset of studies and the variety of Concordia's programme offerings.

It is the intention of everyone involved in the work of the Centre to provide mature students with a sense of belonging and thus help them gain the self-confidence so necessary for successful university work.

The Centre for Mature Students has two locations, as follows:

The Sir George Williams Campus
Hall Building
1455 de Maisonneuve Boulevard W.
4th Floor, Room H-462-11
Tel: 848-3890

Hours:
During Fall/Winter semesters
Monday to Thursday
9:00 a.m. to 8:30 p.m.
Friday
9:00 a.m. to 5:00 p.m.
Summer hours are posted.

The Loyola Campus
Administration Building
7141 Sherbrooke Street W.
4th Floor, AD-424
Tel: 848-3895

Hours:
During Fall/Winter semesters
Monday to Friday
8:30 a.m. to 4:30 p.m.
Summer hours are posted.

14.3 Admission as a Mature Student

The admission of applicants for mature entry is subject to the following conditions:

1. Applicants must have reached the age of 21 by August 1, December 1 or April 1, of a given year, to enter the University in the following September, January or May respectively;
2. Although not meeting the normal academic requirements for admission *(Québec Diplôme d'études collégiales* or the equivalent), applicants must satisfy the University that they have the potential to undertake undergraduate courses; those who have the Québec Diplôme d'études collégiales should contact the Admissions Office;
3. Applicants must have been out of school—that is not engaged in full-time study—for at least 24 months since attaining the age of 18. Applicants who have been out of school for only 12 months are also admissible provided that they have had no unfavourable academic record in the previous 24 months;
4. Applicants must be Canadian Citizens or Permanent Residents (Landed Immigrants).

Applicants must submit a birth certificate or other acceptable proof of age, together with school records and any material which may indicate ability to pursue university studies. (§13 provides general information on how to apply for admission.)

14.4 Programme Requirements

NOTE: As certain courses may require prerequisites, students should consult this Calendar and the appropriate Faculty regarding these.

14.4.1 FACULTY OF ARTS AND SCIENCE

Arts

For those students wishing to pursue a degree or certificate programme in Arts the following additional credits are required:

18 credits chosen with the approval of the Centre for Mature Students prior to registration.

NOTE 1: Mature Entry students may not apply directly to Early Childhood Education, TESL Certificate and, in general, the BEd (TESL). These students must complete 18 credits prior to applying to the above programmes.

NOTE 2: Certain departments in the Faculty have specific requirements, which will take up some or all of the initial 18 credits. The departments below require students to include specific courses as part of their 18 additional credits:

Applied Social Science (BA)
PSYC 200[6]

Applied Social Science (Certificate programmes)
APPS 240[6]
PSYC 200[6]
SOCI 203[3]

Mathematics (BA)
MATH 203[3], 204[3], 205[3]
(Note: Students not having MATH 202[3] or the equivalent must include it in their 18 credits.)

Psychology (BA)
PSYC 200[6]
BIOL 200[6] or 201[3]
3 credits in Mathematics (in preparation for statistics) taken in consultation with the Centre for Mature Students.

Science

For those Mature Entry students pursuing a degree in Science the following courses must be included within their 108-credit requirement:

6 credits in Chemistry selected from CHEM 205[3], 206[3]
9 credits in Mathematics selected from MATH 202[3], 203[3] and 205[3]*
8 credits in Physics: 204[3], 205[3], 224[1], and 225[1]
3-4 credits from: PHYS 206[3] and 226[1], or BIOL 201[3], or GEOL 210[3]**

Students must consult with advisers of the Centre for Mature Students before registering particularly with regard to the sequencing of the above credits in the BSc degree. Consultation with the Centre for Mature Students is also necessary in the choice of the 18 additional credits required in the case of a certificate.

**Students not having MATH 201[3], or the equivalent, must take it in place of one of their elective courses.*

***Students intending to enter programmes of concentration in the departments of Biology, Exercise Science or Psychology should take BIOL 201[3].*

14.4.2 FACULTY OF COMMERCE AND ADMINISTRATION

For entry to degree programmes in Commerce and Administration, mature entry students must include the following within their 108-credit requirement:

9 credits in Mathematics: 208[3], 209[3] and 211[3]

9 elective credits, appropriate for the student's intended programme.

Requirements for certificate programmes are listed with the programme descriptions in §61 of this Calendar.

14.4.3 FACULTY OF ENGINEERING AND COMPUTER SCIENCE

Engineering

Mature entrants to the Bachelor of Engineering degree, which requires completion of a minimum of 115.5 to 118.5 credits depending on the programme chosen, are also required to complete a minimum of 18 credits beyond the normal requirements for their programme, including the following courses:

a) Building, Civil, Industrial and Mechanical Engineering:
CHEM 205[3]
MATH 202[3], 203[3], 204[3], 205[3]
PHYS 204[3], 205[3], 224[1], and 225[1]
COMP 201[3]
Six credits chosen from courses in the humanities and social sciences.

b) Electrical and Computer Engineering:
The courses specified in a), plus PHYS 206[3]

Mature entrants to the Certificate in Quality Control are required to complete a minimum of 18 credits beyond the normal requirements of the programme, including the following courses:*

MATH 202[3], 203[3], 204[3], 205[3]
COMP 201[3]

**In all programmes, some students may require one or more of MATH 200[3] and 201[3] as determined by the Faculty, and/or courses in English as a Second Language, as determined by language proficiency testing.*

Computer Science

Mature Entry students accepted to the Bachelor of Computer Science must include in their degree programme (minimum 108 credits) the following courses:*

a) Information Systems Options:
MATH 202[3], 203[3], 204[3], 205[3]
COMP 201[3]

b) Other Options:
The courses specified in the Information Systems Option above, plus
CHEM 205[3], PHYS 204[3], 205[3], 224[1], 225[1]

Depending on the option chosen, up to 6 of the credits listed above may be applied towards the elective component of the regular degree programme.

**In all options, some students may require one or more of MATH 200[3], 201[3] as determined by the Faculty, and/or courses in English as a Second Language, as determined by language proficiency testing.*

14.4.4 FACULTY OF FINE ARTS

For mature entry to degree and certificate programmes in Fine Arts:

18 elective credits appropriate for entry into the student's ultimate area of concentration in the Faculty of Fine Arts, and chosen with the approval of the faculty adviser.

14.5 Choice of Electives

Within the first 18 credits of study, electives will be chosen in consultation with faculty advisers—through the Centre for Mature Students in the case of Arts and Science. They will normally be at the introductory level, depending on the background of the individual student and the programme of concentration to be undertaken.

In the Faculty of Fine Arts courses will be selected from a list available from the Student Affairs Office of that Faculty.

14.6 Programmes of Study for Senior Students

In keeping with its commitment to lifelong learning and community service, Concordia University offers a Senior Audit programme for Senior students at significantly reduced fees.

Students age 60 and older who wish to attend undergraduate courses in the Faculty of Arts and Science for interest's sake, but who do not wish to enrol for credit, may register in a maximum of six (6) credits per academic year. Such students are not required to write class assignments or final examinations. They do not receive academic credit for audited courses but nonetheless participate along with other students in the course. The Senior Audit Programme is administered through the Centre for Mature Students.

Students age 65 or over may pursue an undergraduate programme or take courses independently for credit at the regular tuition fee. Some assistance through a Senior Student Bursary is possible. Applications and information may be obtained at the Financial Aid Office or at the Centre for Mature Students.

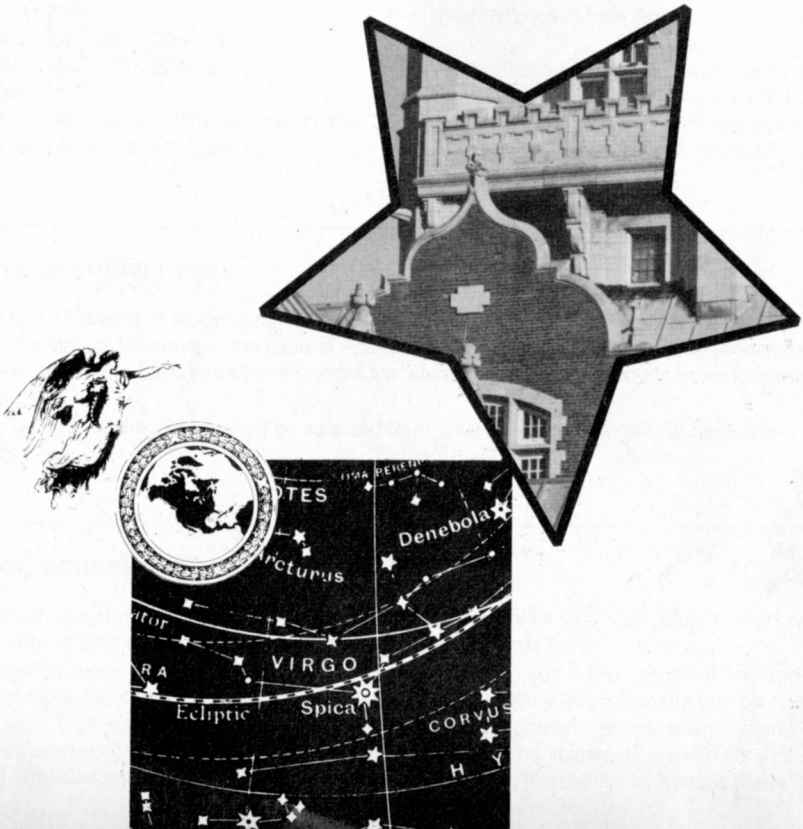
14.6.1 SENIOR SCHOLARSHIPS

Five senior scholarships are offered each year. They are worth $500 a year and may be renewed for up to four years. To be eligible, candidates must be at least 60 years old, and enrolled in a minimum of 12 credits in an undergraduate or graduate programme. Educational background and life experience are taken into account in awarding these scholarships.

There is one additional $500 scholarship made available by money raised by senior students themselves for seniors enrolled in a programme.

Information on these scholarships may be obtained at the Financial Aid Office.

SECTION 15



TUITION AND FEES

15.1 TUITION AND FEES

15.2 PAYMENT OF TUITION AND FEES

15.3 CANCELLATIONS—WITHDRAWALS—ADJUSTMENTS

15 Tuition and Fees

15.1 Tuition and Fees

The University reserves the right to change the published scale of fees without prior notice, and at any time before the beginning of the upcoming academic year.

Tuition fees, for all undergraduate courses, are based on a per credit charge as listed below:

Canadian and other students with Permanent Resident (Landed Immigrant) status:	
Undergraduate	$ 42.16
Independent	$ 47.66
*Former International students	$145.00
*New International students	$195.00

**Certain International students may be eligible to pay the same fees as Canadian students. Detailed information may be obtained from the Accounts or Admissions Offices.*

In addition to the tuition fee, the following fees are charged on a per credit basis:

Student Service Fee	$4.50
Student Association (Commerce)	$1.80
All Other Faculties	$2.07
Academic Materials Fee	$3.50

Other Fees:

Application Fee	$ 15
Acknowledgement of Payment Receipt	$ 1
Course change fee - per form	$ 10
Copy of Registration certificate	$ 1
Duplicate of receipt	$ 2
*Early Registration Deposit	$100
Graduation Fee	$ 40
Late Registration Fee	$ 25
Late Completion Fee	$ 15
Letter of Financial Standing	$ 5
Special Examination Fee (CELDT)	$ 20
Supplemental Examination (plus invigilation fee when applicable)	$ 15
Transcript of academic record (per copy)	$ 2
Copy of student record	$ 1
Letter of attestation (no charge for first letter)	$ 5
Copy of Form T2202 (no charge for first set)	$ 2
Copy of Form TP69v (no charge for first set)	$ 2
Replacement of identification card	$ 5
Re-evaluation fee (refundable if re-evaluation is in student's favour)	$ 15
Copy of University Calendar (no charge for first copy)	$ 2
Surcharge on Private Studies Music courses (6 credits) - subject to change	$380

**In the event that Early registration is not completed as directed, this amount will be forfeited.*

The Board of Governors has approved a resolution by the Engineering and Computer Science Faculty to contribute $50.00 (full time), $25.00 (part time) per student for the acquisition and maintenance of laboratory and computer equipment.

Interest is payable on the outstanding balance of student accounts at the rate of 1.2% per month (15.4% per annum). This rate may change from time to time in conformity with prevailing interest rates.

15.2 Payment of Tuition and Fees

Payment of tuition and other fees may be made in accordance with the following options:

Summer Registration

1. Payment in full at registration.
2. Payment in two instalments:
   a) At registration—one half of tuition fees and 100% of other fees.
   b) Three weeks after registration - balance plus interest from the contract date.

Fall/Winter Registration

Early Registration:
Students who early register reserve their courses for the upcoming academic year well in advance of regular registration. This reservation is subject to changes in the published scale of fees, which may be made without prior notice at any time after issuance of the registration contract but before the beginning of the upcoming academic year, and requires financial commitments as follows:

1. an initial deposit *prior to registering for courses
2. the payment of the first instalment of the balance owing by a deadline in August (i.e. one half of tuition and 100% of other fees less Early Registration deposit)

**In the event that the early registration is not completed as directed, the deposit will be forfeited.*

Regular Registration:

1. Payment in full at registration.
2. a) At registration—one half of tuition fees and all other fees.
   b) By January 15—balance plus interest calculated from contract date.

Winter Registration

1. Payment in full at registration.
2. a) At registration—one half of tuition fees and all other fees.
   b) By January 15—balance plus interest calculated from contract date.

Registration may be cancelled if a cheque is returned for any reason. (Note: For all NSF cheques, replacement must be by cash, certified cheque, or money order.) In any event, a charge of $15.00 will be made for each returned cheque.
Failure to make payment, or to arrange satisfactory settlement of amounts owing to the University when they become due is sufficient cause to bar the student from classes or examinations, and to withhold diploma, scholastic certificate or transcript of record until the debt is adjusted with the University.
Registration is not considered complete until satisfactory arrangements have been made for the payment of fees.
All contracts are subject to revision for changes in the published scale of fees, which may be made without prior notice at any time after issuance of the contract but before the beginning of the upcoming academic year, and for the adjustment of errors or omissions, as well as in the case of courses cancelled by the University.

15.3 Cancellations — Withdrawals — Adjustments

Withdrawal from classes does not entitle a student to refunds of fees or cancellation of contract. Students who withdraw from courses or from the University must comply with the requirements and deadlines set out in the appropriate Undergraduate Class Schedule in order to qualify for a rebate of tuition according to the following scale. Complete withdrawal from the University must be done in person or in writing.

OFF-CAMPUS COURSES: Same schedule as on-campus courses.

Rebate of Tuition

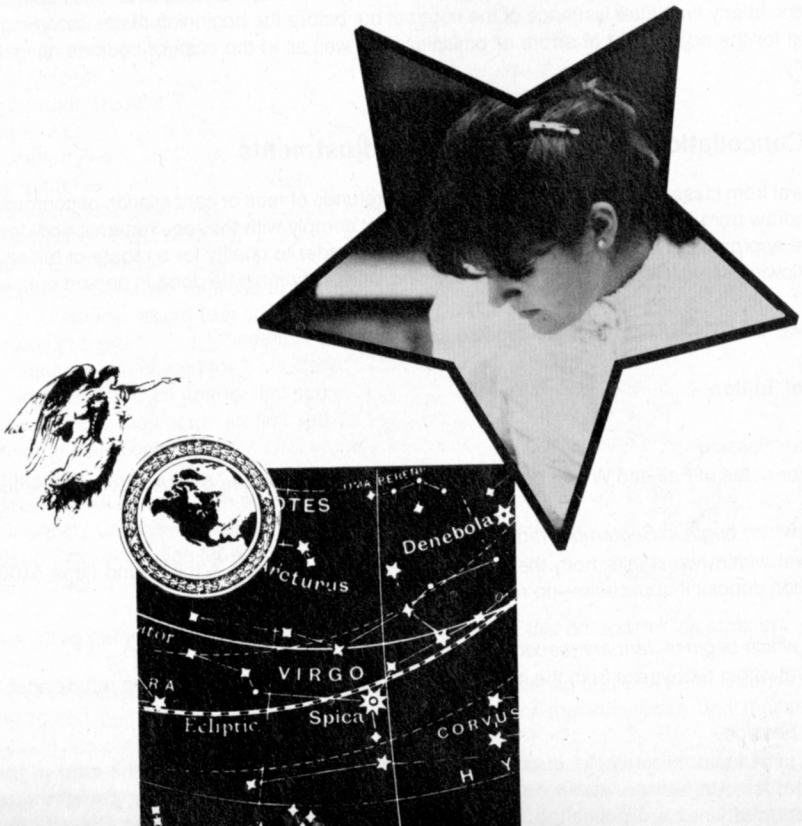
Fall/Winter Session
NOTE: For dates of Fall and Winter course-change periods please see §11 (Academic Calendar).

Courses which begin in September (first-term and two-term)
Withdrawal within two weeks from the date of beginning of classes: A full refund (less $100.00 Early Registration deposit if applicable—no refund after 2 weeks)

Courses which begin in January (second-term)
Withdrawal within two weeks from the date of beginning of classes: Full refund (no refund after 2 weeks).

Summer Session
Courses of at least three weeks duration: Withdrawal within one week of the start of the term.
Courses of less than three weeks duration: Withdrawal on or before the first day of the term.
N.B. For courses with [illegible] on page 9 of the Summer Undergraduate Class Schedule

SECTION 16



ACADEMIC REGULATIONS

16.1 GENERAL INFORMATION
- 16.1.1 Academic Year
- 16.1.2 Definition of Credit
- 16.1.3 Status
- 16.1.4 Course Load
- 16.1.5 Residence Requirements
- 16.1.6 Registration for courses
- 16.1.7 Withdrawal
- 16.1.8 Inter-University Agreement
- 16.1.9 Graduation
- 16.1.10 High Academic Achievement
- 16.1.11 Transcripts
- 16.1.12 Student Request Committee of Faculty Councils
- 16.1.13 Cancellation of Classes

16.2 PROGRAMMES AND REGULATIONS
- 16.2.1 Curriculum Obligations
- 16.2.2 Curriculum Regulations
- 16.2.3 Concentration Requirements
- 16.2.4 Honours Programmes
- 16.2.5 Specialization Programmes
- 16.2.6 Major Programmes
- 16.2.7 Minor Programmes
- 16.2.8 Double Minor Programmes
- 16.2.9 Combinations
- 16.2.10 Certificate Programmes
- 16.2.11 Writing Skills Requirement

16.3 EVALUATION, GRADING, EXAMINATIONS AND ADVANCEMENT
- 16.3.1 Evaluation
- 16.3.2 Grading System
- 16.3.3 Failing Grades and Special Cases
- 16.3.4 Administrative Notations
- 16.3.5 Academic Re-evaluation
- 16.3.6 Examinations
- 16.3.7 Academic Performance Requirements
- 16.3.8 Regulations for Courses Notated as Incomplete
- 16.3.9 Repetition of Courses
- 16.3.10 Code of Conduct (Academic)

16 Academic Regulations

Registrar
BRUCE SMART

Assistant Registrar
RAY MARTIN

Assistant Registrar
CAROL FOSTER

Co-ordinator of Graduation Evaluation
VIRGINIA BOWKER

Director of Examinations
LYNNE CAMPBELL

Manager Student Records
STAN HILL

Director of Registration and Academic Scheduling
MARY TARLTON

Manager Registrar's Services
WILLIAM RASO

16.1 General Information

This calendar is the official University document on academic programmes and on the regulations pertaining to them. All members of the University community are expected to be familiar with the regulations which concern them. In particular, students are responsible for knowing the regulations and for complying with them. Specific written permission must be obtained from the appropriate authority for exemption from any academic regulation. Routine approval of a student's registration does not constitute approval of an exemption or exception.

All students at the undergraduate level, whether enrolled in degree or certificate programmes or registered as Visiting or Independent students, are subject to the academic regulations contained in this section. Definitions of terms will be found in §13.2.

16.1.1 ACADEMIC YEAR

The Academic Year is made up of a Regular Session (September to April) and a Summer Session (May to August). For record purposes, a given academic year includes the Summer Session and the following Regular Session.

Regular Session:

The Regular Session is divided into a Fall term (September-December) and a Winter term (January-April), each of fifteen weeks' duration, including an examination period. The Academic Calendar (§11) contains precise dates for the beginning and end of classes and the beginning and end of the examination period. Final examinations must be held within this examination period.

Summer Session:

The Summer Session covers all courses offered between the beginning of May and the middle of August. There is an evening session of twelve weeks' duration, including an examination period, running from early May to late July and a concentrated six-week day session, including examinations, running from the beginning of July to mid-August.

16.1.2 DEFINITION OF CREDIT

In accordance with the recommendations of the Québec Council of Universities, effective 1974-75, the credit base takes into account the total activity of the student, in terms of lectures, conferences, laboratories, studio or practice periods, examinations, and personal work. One credit represents, for the average student, a minimum of 45 hours spread across the various activities. Full-time students will normally take 30 credits in the Regular Session. For rules on the maximum credits permitted each session, see §16.1.4.

16.1.3 STATUS

Full-Time and Part-Time:

Full-time undergraduates are those for whom university studies are their principal activity, while part-time undergraduates are those for whom university studies are not their principal activity. Eligibility for government loans and bursaries requires full-time status at all times during the academic year*. Identification of full-time and part-time status depends on the number of credits for which a student is registered at the close of the course-change period according to the following table:

	Full-time*	Part-Time
Registration for both Fall and Winter terms	24 Credits or More	Less than 24 Credits
Registration for Fall Term Only	12 Credits or More	Less than 12 Credits
Registration for Winter Term Only	12 Credits or More	Less than 12 Credits
Registration for the Summer Session	12 Credits (maximum)	Less than 12 Credits

NOTE:
Financial Aid Students
*Please see §18.3.3 (Financial Aid) for special rules on status that have been established by the Government of Québec for students receiving Québec loans and/or bursaries.

16.1.4 COURSE LOAD

Notwithstanding the number of credits used to determine the status of a student for statistical and other reporting purposes, as listed in §16.1.3, the maximum course load for full-time students, part-time students, visiting students, and independent students is as follows:

A. Regular Session—Full-Time Status

The course load varies according to the faculty in which the student is enrolled:

FACULTIES OF ARTS AND SCIENCE, COMMERCE AND ADMINISTRATION, AND FINE ARTS:
A student may register for a maximum of 30 credits in any Regular Session equally divided between the Fall and Winter terms.

FACULTY OF ENGINEERING AND COMPUTER SCIENCE:
See under Engineering Faculty §71 for Engineering programmes. For Computer Science programmes, the maximum is 30 credits in any Regular Session equally divided between the Fall and Winter terms.

B. Regular Session Part-Time Students

Part-time students in all faculties, and all Independent students, may register for a maximum of 18 credits, equally divided between the Fall and Winter Terms.

C. Summer Session

All students, other than those enrolled in the Institute for Co-Operative Education, may not take more than a total of 12 credits of work during the Summer Session (8 credits for Engineering and Computer Science students) because of the concentrated nature of the schedule. The Summer Session includes all courses scheduled from the month of May to the month of August inclusive.

16.1.5 RESIDENCE REQUIREMENTS

1. Out of the total number of credits required for a bachelor's degree, a minimum of 45 credits must be taken at Concordia University for all bachelor's degrees except that of the Bachelor of Engineering, where the minimum is 60 credits. Unless otherwise authorized by the Faculty to which the student has been admitted, these will be the *last* 45 credits (or the *last* 60 in the case of the Bachelor of Engineering).
The proportion of degree credits which must be taken at Concordia University in honours, specializations, majors, minors or other elements of concentration will be determined by individual faculties but should be not less than 50%.
2. Students who already possess a bachelor's degree may undertake a second bachelor's degree, under the conditions laid down below. Students are, however, advised that before registering for a second bachelor's degree they should consider whether their purpose might not be better served by taking a diploma or master's programme. To obtain a second bachelor's degree at Concordia University students must:
a) Register in an established programme with a higher degree of concentration than a Minor.
b) Complete sixty credits in courses other than those credited towards the first degree, at least thirty-six of which must be taken in the new field of concentration.
3. Any student seeking to transfer to Concordia University after having failed at another university, or after having compiled an unsatisfactory record at another university, must fulfill the residence requirements stipulated upon admission. In general, a minimum of sixty credits will be required for any degree.

16.1.6 REGISTRATION FOR COURSES

Selection of courses for a session is done during a specified period prior to the start of classes. In addition, most undergraduate students take advantage of Early Registration for the Fall/Winter Session. Early Registration is not available to Independent students.
Please consult the appropriate class schedule for details regarding dates, hours, locations and appointments. Class schedules are available at both Registrar's Services Department locations.

16.1.7 WITHDRAWAL

Students who wish to cancel a course or courses must notify the Registrar's Office, either on the specific form designated for the purpose and available from the Registrar's Services Department, or by letter. Students who wish to withdraw entirely from the University must cancel all their courses and formally notify the Registrar's Office in writing. The academic deadlines are listed in §11, and in the appropriate Undergraduate Class Schedule. Refer also to §15.3 for information on tuition fee rebates.
The responsibility for taking all steps necessary for withdrawal is entirely that of the student. Ceasing to attend classes, or informing an instructor of intent to withdraw does not constitute withdrawal. Students who do not formally withdraw will receive a failing grade.

For each session there is a final date beyond which a student may not withdraw from a course. An evaluation by the instructor of a student's progress is not mandatory prior to the withdrawal deadline. Students are referred to the Academic Calendar (§11) and to the rules for Rebate of Tuition (§15.3).

16.1.8 INTER-UNIVERSITY AGREEMENT

1. Cross-registration (Provincial)

Québec universities have agreed to permit students registered in a programme at one university (called the home university), to take one or more courses at another university (called the host university) if they have valid reasons for doing so.

Authorization for an undergraduate student to cross-register must be given by the student's academic adviser, the Associate/Assistant/Vice Dean of the student's Faculty, and the Registrar.

This agreement in no way interferes with the host university's right to accept or refuse, as it sees fit, registration of a student from another university in any of the courses or programmes that it offers. The student is expected to follow the registration procedures of the host university. In addition when attending the host university students are subject to the regulations of the host university, EXCEPT for tuition and fees policies which will be governed by the home university.

Credits earned within this policy are counted towards the University residence requirements. Any failures will similarly be counted in the student's assessment under the applicable Failure Regulations, §16.3.7.

NOTE: Students currently registered at this University wishing to take courses at another university other than under the aegis of the Inter-University Agreement should refer to the applicable regulations in §13.4.3.

2. Student Exchange Programme (International)

In order to enhance relationships between the people and cultures of different countries, Concordia University administers student exchange programmes with various countries. These programmes enable students to gain first-hand knowledge and understanding of other areas of the world.

Individual faculties have also established student exchange programmes and should be consulted directly for further information.

The Concordia programmes are available to all FULL-TIME Concordia University students who meet the following conditions:

- must be a Canadian Citizen or Permanent Resident;
- must have a good to excellent academic record and be in good academic standing in their faculty;
- must have completed at least one year of full-time study in the programme in which they are registered;
- must remain in the same programme while studying at the host university;
- must be fluent in the language of the host university;
- must assume health insurance fees, living expenses and transportation costs in the host country.

For further information, please contact the *Council for International Cooperation, Office of the Vice-Rector Academic*, located on the Loyola Campus in the Administration Building.

3. Concordia à la Sorbonne (International—Summer Term Only)

The Département d'études françaises sponsors a French Summer School in Paris in cooperation with the Sorbonne. Credit courses are offered in French civilization and literature at the 300 and 400 levels. Further information can be obtained from the Département d'études françaises at 848-7500.

16.1.9 GRADUATION

Degree and certificate candidates who expect to complete requirements in a particular year must contact the Registrar's Office to make application for that degree or certificate. Graduation Application Forms provided by the Registrar's Services Department must be submitted before July 15th for Fall graduation and January 15th for Spring graduation.

16.1.10 HIGH ACADEMIC ACHIEVEMENT

A degree With Distinction or With Great Distinction will be awarded to students who obtain a grade point average (GPA) of 3.40 for "With Distinction", or 4.00 for "With Great Distinction".

The grade point average for students in the Faculty of Arts & Science, the Faculty of Commerce & Administration, and the Faculty of Fine Arts will be calculated over the last ninety credits as determined by established Graduation Department practices. For students in the Faculty of Engineering and Computer Science the grade point average will be calculated over the entire programme. Additional credits in extended programmes are not normally included in any calculation. In the case of transfer students, all courses taken at Concordia will be included. However, a transfer student must have taken a minimum of sixty credits at Concordia in order to be eligible for distinguished mention.

16.1.11 TRANSCRIPTS

Students may obtain an unofficial copy of their record from the Registrar's Services Department during normal operating hours. Official Transcripts, however, are not issued to students but are sent directly to another institution or potential employer at the student's written request, provided there is no outstanding account owing to the University.

16.1.12 STUDENT REQUEST COMMITTEE OF FACULTY COUNCILS

Each Faculty has a Student Request Committee made up as follows:

- 3 faculty members appointed by the Faculty Council (which may also appoint alternates).
- 1 representative from the Registrar's Office or the Admissions Office.
- 1 student appointed by the Faculty Council.
- the Associate/Assistant/Vice Dean who acts as convener.

Student Request Committees are authorized to handle applications from full-time or part-time students (except independent students) on matters relating to exceptions to academic regulations and to the regulations which govern academic programmes. Requests on procedural matters will be redirected to the appropriate administrative office.

Each Student Request Committee will establish guidelines for the treatment of applications and delegate to the Associate/Assistant/Vice Dean the responsibility for handling certain kinds of applications within these guidelines.

Where a decision has been made by the Associate/Assistant/Vice Dean in his or her capacity as delegate of the committee, students and members of the faculty may request that this decision be reviewed by the committee as a whole. Decisions of the committee are final.

Independent students must submit *all* requests relating to University Regulations to the Registrar.

16.1.13 CANCELLATION OF CLASSES

Normally class cancellations are posted on the classroom door prior to the commencement of class. In some instances instructors may be late. In such cases, classes will be considered officially cancelled, if an instructor is 15 minutes overdue for a 50-minute class, 20 minutes overdue for a 75-minute class, or 30 minutes overdue for a 115-minute class.

16.2 Programmes and Regulations

16.2.1 CURRICULUM OBLIGATIONS

The University recognizes the principle that students should be allowed, subject to the conditions stated below, to complete their degree programme (e.g., Bachelor of Arts, Bachelor of Commerce, etc.) as well as their programme of concentration (Honours, Specialization, Major), in accordance with the requirements in force at the time when they were first admitted to the programme and/or concentration.

1. With respect to the format and curriculum content of specific programmes the University reserves the right to modify the curriculum requirements in the light of (a) changing trends in academic and professional fields, and (b) availability of appropriate resources. Where a programme is substantially altered for such reason by action of the University Senate, the University recognizes its responsibility to offer suitable transition arrangements with respect to modified programmes. In these exceptional cases the modified programme requirements should become effective for all students no later than five years after the effective date of change for newly admitted students.
2. The University reserves the right to cancel any degree, diploma, or certificate programme. In the event of the cancellation of a programme, the University recognizes its responsibility to offer courses in the cancelled programme. However, these courses would be phased out in accordance with a schedule which will depend upon the number of students involved. Students in the programme would be informed of this schedule at the time of cancellation. Where students in good standing have not been registered for over three years, the University, while not questioning such students' rights to remain in the University, reserves the right, where circumstances warrant, to refuse such students permission to continue in the programme in which they were registered at the point where studies were interrupted.
3. Where students acquire credit toward a degree, diploma or certificate in a discontinuous manner and over a protracted period of time subsequent to their admission, the University reserves the right, at any time, to require such students to take further credits or fulfill additional requirements in order to obtain that degree, diploma or certificate.
4. Modifications to the academic regulations in §16.1 and 16.3 become effective on a given date without regard to the date of admission to a programme with the following exceptions:

   16.1.5 Residence Requirements
   16.1.10 High Academic Achievement
   16.3.7 Academic Performance Requirements

Modifications to these three regulations will apply only to students admitted or readmitted to a programme on or after the coming into effect of such modifications.

5. Where a student fails an academic year, the University reserves the right at the time of readmission to require such a student to take further credits or to repeat certain courses. The student may also be required to meet any changes in the academic regulations that may have occurred since being admitted to the programme.

16.2.2 CURRICULUM REGULATIONS

1. The regulations relating to the degree requirements are located in the Faculty sections:

   Faculty of Arts and Science: §31
   Faculty of Commerce and Administration: §61
   Faculty of Engineering and Computer Science: §71
   Faculty of Fine Arts: §81

16.2.3 CONCENTRATION REQUIREMENT

Since the CEGEP programme is designed to give all students the opportunity to explore different fields and thus acquire a broad general basis for future study, the undergraduate programme requires some degree of concentration, according to the interests and capability of the student. There are several forms of concentration, ranging through Honours, which require success in a programme of high concentration accompanied by a prescribed level of performance; the Specialization and the Major requiring varying degrees of concentration without a prescribed performance requirement; and the Double Minor, involving a lesser degree of concentration in two disciplines or fields, and without a prescribed performance requirement.

In order to graduate a student must have completed one of the following types of programme concentrations: Honours, Specialization, or Major. Any one of these may be combined with a Minor. In the Faculty of Fine Arts the degree of BFA may be awarded for a Double Minor.

Prior to registration, students will be required to select one of the types of programme concentration outlined above. In the case of Honours, students will register upon entry in an Honours *programme,* but their acceptance as Honours *students* will depend on their performance during their first year. Students failing to meet requirements for Honours standing will proceed in either a Specialization or a Major programme.

16.2.4 HONOURS PROGRAMMES

These regulations represent a minimum academic standard for Honours programmes. All programmes and additional Faculty regulations, including those with higher standards, are listed in the Faculty sections under "Honours Programmes".

The University has approved programmes leading to an Honours degree in certain selected fields. The Honours programme consists of 60 or more credits in a discipline or field, with superior performance being required to enter and remain in the programme. In order to qualify for an Honours degree a student must comply with the regulations set forth below:

1. An Honours student must meet the general degree requirements as well as the specific requirements for an Honours degree.
2. An Honours student must maintain a GPA of 3.00 in all Honours courses; the minimum acceptable grade in any single Honours course is "C".
3. An Honours student must have a minimum GPA of 2.70 for Honours courses taken in each academic year. For part-time students this will be calculated in 18-credit blocks.
4. In the non-Honours courses of the degree programme, an Honours student must have a GPA of no less than 2.00.
5. Students who are required to withdraw from the Honours programme will proceed in the Major or Specialization programme. Reinstatement in the Honours programme is possible only by appeal to the Faculty Honours Committee.

16.2.5 SPECIALIZATION PROGRAMMES

The Specialization, in keeping with the structures recommended by the Québec Council of Universities, is an approved sequence of courses totaling 60 or more credits. In very exceptional cases there may be a performance requirement.

16.2.6 MAJOR PROGRAMMES

The Major, again in keeping with the structures recommended by the Québec Council of Universities, is an approved sequence of courses totaling 36 or more credits, except in the Faculty of Commerce and Administration where the Major consists of at least 24 credits in the chosen discipline in addition to the required 51-credit core. The Major, like the Specialization, may include certain approved courses in other closely related fields.

16.2.7 MINOR PROGRAMMES

A Minor programme, again in keeping with the structures recommended by the Québec Council of Universities, is an approved sequence of courses totaling 24 or more credits, except in the Faculty of Commerce and Administration where the Minor consists of at least 12 credits in the chosen discipline in addition to the required 51-credit core.

16.2.8 DOUBLE MINOR PROGRAMMES

In the Faculty of Fine Arts Double Minor programmes are made up of two approved sequences of courses totaling 24 or more credits each in two specific disciplines or fields.

16.2.9 COMBINATIONS

An Honours, Specialization, or a Major programme may be combined with a Minor programme.

16.2.10 CERTIFICATE PROGRAMMES

An Undergraduate Certificate programme is a coherent programme normally of 30 credits made up of regular undergraduate courses that are, in turn, normally applicable to the appropriate bachelor's degree. There is no guarantee that a certificate programme can be completed in one academic year.

16.2.11 WRITING SKILLS REQUIREMENT

Concordia University is committed to ensuring that its graduating students possess good writing skills. Hence, every student admitted to a bachelor's degree programme in or after September 1983 (or September 1984 in the case of programmes in the Faculty of Fine Arts) is required to demonstrate an acceptable level of competence in written English or French prior to graduation. This requirement can be met in one of three ways:

1. *Taking a writing course*

Any student can satisfy the writing skills requirement by achieving a grade of C- or better in English (ENGL) 212 or Français (FRAN) 400.

Students in the Faculty of Engineering and Computer Science are required to take ENCS 281. A grade of C- or better in that course will satisfy the requirement.

Students in Journalism programmes can satisfy the requirement by achieving C- or better in the required course JOUR 201.

2. *Taking the University Writing Test*
The UWT is a short composition in English or French on the student's choice of one of several topics. The test is offered several times a year and may be taken as often as necessary. Students are not charged a fee for the UWT. Unsuccessful attempts do not appear on a student's record.
All newly admitted students, except those required to take ENCS 281 or JOUR 201, and those registered for ENGL 212 or FRAN 400, should register for the first available session of the UWT. Dates of the test and registration procedures are advertised in the campus media or may be obtained from Registrar's Services.
Following each session of the UWT, students who have taken it will be advised:
a) that they have passed the test and satisfied the writing skills requirement;
b) that they should retake the test or register for an appropriate writing course, at their discretion; or
c) that it is unlikely they will pass the UWT or be admitted to ENGL 212 or FRAN 400 without remedial work (e.g. ENGL 205, ENGL 206 or comparable courses in Études françaises).

3. *Students required to be tested for English proficiency prior to admission*
Students who achieve a prescribed level on the Concordia English Language Diagnostic Test (CELDT), the Test of English as a Foreign Language (TOEFL) or the University of Michigan English Language Test will have satisfied the writing skills requirement. (Information about the specific level required can be obtained from the Admissions Office.)
Students who are admitted with the requirement that they take specific courses in English as a Second Language (ESL) will satisfy the writing skills requirement by achieving a grade of at least C- in ESL 209.

Note 1: Students who do not satisfy the writing skills requirement will not be eligible to graduate. In order to avoid the possibility of delayed graduation if remedial work proves necessary, students are strongly encouraged to meet the requirement very early in their programme.
Note 2: Students enrolled in Certificate programmes, and Independent students are not subject to the writing skills requirement.

16.3 Evaluation, Grading, Examinations and Advancement

16.3.1 EVALUATION

A university degree certifies that its holder has attained a measurable level of achievement, as established by a recognized system of evaluation. It is consequently required that the performance of each student in each course be evaluated by the instructor (or instructors) responsible for the course.
The final grade that assesses the performance of each student in each course will take into account the total measurable performance of the student in that course. Specifically, the grade will be given on the basis of one or more of the following:
1. Assigned work, term papers, projects, etc.
2. Class participation which, in the case of certain disciplines, may justify an attendance requirement.
3. Progress tests.
4. Laboratory tests and/or laboratory work.
5. Mid-term and/or final examinations.
6. A level of written expression may be given consideration in determining the final grade.

The weighting of the various evaluative elements is the responsibility of the instructor. At the beginning of the course the instructor will inform the class in writing of the evaluation scheme to be used. This scheme may not be altered without appropriate prior notice. Resulting final grades are not official until posted by the Registrar's Office after approval by the appropriate Faculty.
While the language of instruction in Concordia University is normally English, students have the right to write their assignments and examinations in French. It must be understood, however, that in a case where the instructor cannot read French, the assignments or examinations will have to be read by another person, with possible resulting disadvantages and delays for the student. Students are advised to inquire of the instructor at the beginning of their course whether he or she will personally read assignments and/or examinations written in French. Notwithstanding the above, language and literature departments may require assignments and examinations to be written in the language being studied.

16.3.2 GRADING SYSTEM

In each course, the instructor submits a grade for every student registered. The grades are submitted in an alphabetical form. Using the grade point equivalents listed below, grade point averages (GPA) are calculated and used for the evaluation of academic achievement, honours standing, prizes, and academic standing.

Grade	*Grade Points*	
A+	4.30	Outstanding
A	4.00	
A-	3.70	
B+	3.30	Very Good
B	3.00	
B-	2.70	
C+	2.30	Satisfactory
C	2.00	
C-	1.70	

D+	1.30	Marginal Pass
D	1.00	
D-	0.70	
F, FNS	0	Failure
R	0	Repeat—Failure
Grade Not Reported (NR)	0	

Passing courses required to fulfil curriculum requirements is not sufficient to graduate as there is also an academic performance requirement (Grade Point Average) in most degree programmes. See the pertinent section of each Faculty's entry in the Calendar for complete details:

Faculty of Arts and Science: §31
Faculty of Commerce and Administration: §61
Faculty of Engineering and Computer Science: §71
The Faculty of Fine Arts does not have a Grade Point Average requirement for graduation.

16.3.3 FAILING GRADES AND SPECIAL CASES

Failing Grade (F)

The grade submitted will be "F".

For courses in which supplemental examinations are not precluded, a student to whom an "F" grade has been assigned and who is in good academic standing, may, subject to the regulations of the Faculty, write a supplemental examination.

For courses in which supplemental examinations are precluded, this grade will be recorded as FNS to draw attention to the absence of supplemental privileges for the course in question.

Repeat Failing Grade (R)

The grade submitted will be "R".

A student graded "R" in a course may not write a supplemental or replacement examination or complete a course notated as Incomplete, and must repeat the course to receive credit, providing such repetitions are permitted within the failure regulations and/or the regulations concerning the repetition of courses.

Not Reported (NR)

"NR"—in the event that a student appears to have withdrawn unofficially from a course, and no material is available for evaluation, the instructor will clearly not be able to submit a grade. The Registrar will indicate this situation with the notation NR (Not Reported). A student assigned an NR in a course may not write a supplemental or replacement examination nor apply for a MED notation. This notation denotes a failure for purposes of counting the number of failed courses in assessing academic standing. This notation carries a grade point value of zero.

Medical (MED)

MED (Medical) denotes that an examination or assignment was missed for medical reasons. This grade is entered on the record by the Examinations Office. It is the responsibility of the student to complete an "Application for MED Grade" and submit it within ten (10) days of the missed examination (of the end of term in the case of a missed assignment) to the Examinations Office, not to the instructor, department or Faculty. Application forms are available from the Examinations Office. An acceptable medical certificate (certified by a physician on official letterhead) must accompany the application.

The Examinations Office may require further information from the physician; in such cases an authorization form must be submitted by the student. Repeated submissions of medical certificates may lead to the referral of the student to a physician appointed by the University for his or her recommendations.

A "MED" grade will not be assigned if the original grade or notation was either "R" or "NR".

16.3.4 ADMINISTRATIVE NOTATIONS

These notations may be used only in combination with a grade given for the course (such as "F/INC", "F/DNW").

I. Incomplete (INC)

"INC" denotes that, though the final examination, if any, was written, work essential for the evaluation of a student's performance, such as a term paper or a laboratory, was not completed. The grade accompanying the "INC" notation is to be assigned on the basis that the incomplete work is weighed as "0".

1. A student must remain in good standing at the time of the annual assessment of students under the Failure Regulations (§16.3.7) in order to be eligible to complete a course with an INC notation subject to the limitation dates below.
2. A failed student, or a student with conditional standing is ineligible to complete a course with an INC notation.
3. A student receiving an "R" grade with an INC notation is ineligible to complete that course.
4. An application to complete a course with an INC notation must be submitted by:
   Fall-term courses: February 1
   Winter-term courses: June 15
   Summer-session courses: October 1
5. The limiting dates for the submission of late work are:

a) For fall-term courses not later than April 1.
b) For all other courses in the Regular Session not later than August 1.
c) For all courses in the Summer Session not later than November 1.

II. Did Not Write (DNW)

"DNW" denotes that, though the instructor marked the term work, the final examination was not written. A student in good standing who has a DNW notation on record is eligible to write a supplemental examination except if the grade assigned is "R" or "FNS".
In some circumstances, both INC and DNW may be used simultaneously.

Replacement of "F", DNW, INC and MED Entries

The method of recording changes from "F", DNW, INC and MED entries will be as follows:
1. In cases where a replacement examination or a late completion has been allowed on medical or compassionate grounds, the new grade will replace the original entry.
2. In all other instances, the original entry will be retained on the transcript. A second entry of the course code will be made along with the final grade.
3. Students failing a supplemental examination will receive the grade "R".
4. Students eligible to write a replacement examination on medical grounds, but who do not wish to avail themselves of this right, will have their records altered by the Registrar's Office from the original entry of "F-DNW" or "F-INC" submitted by the instructor to "MED-DNW", or "MED-INC".

Discontinued (DISC)

"DISC" applies to courses that are properly dropped *after* the end of the course-change period. The course will remain permanently on the student's academic record with the notation DISC. It will appear on official transcripts of the record.

16.3.5 ACADEMIC RE-EVALUATION

I. General

1. All students have the right to apply for the re-evaluation of any grade they receive. Such an application may be based on dissatisfaction with either the grade received or the method of grading. Grades may be lowered, maintained or raised as a result of the re-evaluation.
2. Students have the right to see their examination papers and any marked material that has contributed to the grading of a course. Students are responsible for the preservation and production in the case of a re-evaluation of any marked material that has been returned to them by an instructor. Students have the right to have their examination papers or any other marked material re-evaluated separately. Departments are responsible for the preservation and production of written materials in their possession for a period of six months following the official release of grades.

II. Normal Procedure

1. Students who seek re-evaluation of their work will, in the first instance, endeavour to meet with the instructor and explain their position. If they remain dissatisfied, or are unable to meet with the instructor, they may, on receipt of the final grade for the course, apply formally for re-evaluation.
2. A formal application for re-evaluation will be made to the Registrar. Each application must be on the appropriate form, and be in writing and signed. It must set out the reasons for the dissatisfaction, and also contain a statement that the student has met with the instructor, or has tried to meet with the instructor and failed. A fee of $15 per application will be charged. This amount will be reimbursed if the application results in the grade being raised.
3. An application must be submitted by:
   Fall-term courses : February 1
   Winter-term courses: June 15
   Summer-session courses: October 1

The Registrar may extend these deadlines in particular cases, but only if the person applying for re-evaluation could not reasonably have done so within the above deadlines.
4. The Registrar will forward the application immediately to the chair of the appropriate department, with a copy to the instructor and the Dean.
5. According to the nature of the application, the department chair will appoint a person or persons to carry out a re-evaluation or investigation, and will communicate the name(s) to the student, the instructor, the appropriate Dean and the Registrar. Normally a member of the Faculty in whose course the student is currently enrolled is not eligible to conduct a re-evaluation or investigation. Where the department chair was the instructor performing the evaluation the appropriate dean will make the appointments.
6. The re-evaluation or investigation will normally be completed within 21 days of the receipt of the application by the chair.
7. The chair will inform the student, the instructor, the Dean and the Registrar of the decision of the person(s) charged with the re-evaluation or investigation. This decision is final.

III. Priority Procedure

1. The priority appeal procedure is provided to accelerate the process for specific courses designated by the Faculties. A list of these courses is posted in the Registrar's Service Department prior to the beginning of the course-change period each term.
2. Students registered in courses that have been designated by the faculties may file a priority appeal with the Registrar as soon as the grade is known, but in no case later than 3 days before the end of the course-change period for the next term.
3. Students who opt for this priority procedure will still, in the first instance, endeavour to meet with the

instructor. If the issue is resolved between the student and the instructor after an appeal is launched, the appeal must be cancelled by the student. If the appeal is not cancelled the fee of $15 will not be reimbursed.
4. The Dean will appoint a person who, in collaboration with the Registrar, will ensure accelerated processing of priority appeals in so far as possible, in accordance with the procedures set out in II, 5.
5. The re-evaluation or investigation of priority applications must be completed prior to the last day of the course-change period for the next term.
6. The Dean's appointee will inform the student, the instructor, the Dean and the Registrar of the decision of the person(s) charged with the re-evaluation or investigation. This decision is final.

IV. Appeals

1. Both the student and the instructor have a right of appeal on procedural grounds only against a re-evaluation decision.
2. An appeal will be made to the Dean and will normally be lodged within 14 days of the announcement of the decision by the chair. Each appeal must be on the appropriate form, and be in writing and signed. It must set out the reasons for the appeal.
3. It is the responsibility of the Dean to inform the student or the instructor, as may be required, the chair and the Registrar that an appeal has been received.
4. The Dean will refer the appeal to the Faculty Appeal Committee, a standing committee of Faculty Council.
5. Faculty Appeal Committee procedures will be determined by the appropriate Faculty Council.
6. The Faculty Appeal Committee will be composed of an equal number of faculty and students, who will choose a chair from outside their initial membership.
7(a) The Faculty Appeal Committee will deal with the appeal as it deems necessary in order to decide whether the re-evaluation procedure was correctly followed.
(b) Both the student and the instructor have the right to be present at the hearing of the appeal, to address the committee, and to present witnesses. The student may be accompanied by an adviser from within the University who may speak on his or her behalf. Following the hearing, the committee will deliberate in private.
8. The decision will normally be rendered within twenty-one days of the lodging of an appeal. If the Faculty Appeal Committee finds that the re-evaluation procedure was not correctly followed it will instruct the department chair to arrange for a fresh re-evaluation.
9. There is no further appeal once the Faculty Appeal Committee has rendered its decision.
10. It is the responsibility of the Committee to inform the student, the instructor, the chair, the Dean, and the Registrar of the decision.

16.3.6 EXAMINATIONS

A validated student identification card must be presented in order to sit any examination.

I. Final Examinations

1. Refer to §11, Academic Calendar, for the scheduled examination periods.
2. Students should not make personal commitments for the examination periods until after the *FINAL* Examination Timetable, with specific dates and times, is posted. No special arrangements will be made in the event of personal time conflicts.
3. No tests or examinations are permitted in the final week of the term. Any exceptions must be approved in advance by the appropriate Faculty Council.
4. No candidate shall be permitted to enter the examination room after the expiration of one hour, or to leave during the first hour of the examination.

II. Supplemental and Replacement Examinations—Regulations

1. Supplemental Examinations

a) Each Faculty determines the availability of supplemental examinations for the courses offered by the Faculty. Such availability is governed by the rules of the Faculty in which the course is offered, not those of the Faculty in which a student is registered.
b) A student who has received an "R" grade is ineligible to write a supplemental examination.
c) A student is not permitted to write two supplemental examinations for the same course, whether or not the course is being repeated. However, a supplemental may be written for a course being repeated if the student has not written one previously for that course.
d) A failed student, or a student on academic probation, or a student with conditional standing, is not permitted to write supplemental examinations.
e) Should a student fail a course for which there is no supplemental examination, the absence of a supplemental examination will be recorded together with the failing grade (§16.3.3).
f) A grade received as a result of writing a supplemental examination will count as a second course attempt. It will be included in the calculation of Grade Point Averages and in the assessment of standing under the failure regulations, as will the original failure.

2. Replacement Examinations

a) Medical reasons (certified by a physician on official letterhead) can constitute a valid excuse for missing an examination (§16.3.3).
b) A student who is taken ill during an examination and so is unable to finish it should obtain a written statement to this effect from the nurse on duty at the Health Centre, and deliver that statement within ten days to the Examinations Office.
c) A student who presents a valid medical excuse may apply to write a replacement examination which will count for the same weighting in the evaluation scheme used in the course, and will cover the same course material, as the examination that was missed.
d) A student who has received an "R" grade is ineligible to write a replacement examination.

e) A student who fails the course after writing a replacement examination may apply to write a supplemental examination.

f) A student who has missed a supplemental or a replacement examination for medical reasons (1) must repeat the course if registered in the BEng degree programme or (2) may apply once more to write a replacement or supplemental examination during the next scheduled supplemental examination period if registered in any other programme. In the latter case, after two replacement or supplemental examinations are missed because of medical reasons, the student will be required to re-register for the course.

The grade assigned, either F, F/DNW or MED/DNW, will remain as the final grade in courses for which the student is required to re-register.

3. Applications

a) Supplemental and replacement examinations for courses taken in the Regular Session will be written in the following July or August. Supplemental and replacement examinations for courses taken in the Summer Session will be written in the following October.

b) Applications to write a supplemental or a replacement examination for a course in the Summer Session must be submitted by September 21, and for a course in the Regular Session by June 15. Graduating students have until February 1 to submit an application to write a supplemental or replacement examination for a course in the Fall Term. The appropriate fee must accompany all applications for supplemental examinations. There is no fee for a replacement examination.

c) A student who wishes to write a supplemental or replacement examination at an external centre must complete an external application form for a course in the Regular Session by June 1.

An external supplemental examination will be permitted only at university centres established in Canada.

16.3.7 ACADEMIC PERFORMANCE REQUIREMENTS

I. Performance Regulations

All students are required to achieve an acceptable standard of scholarship. Academic Standing is determined either on the basis of an Annual Weighted Grade Point Average (WGPA) as defined below, or on the basis of ratio of credits failed in relation to credits passed.

The specific regulations applicable to students registered in each Faculty can be found in the following sections of the Calendar:

Faculty	See Calendar Section	System Used
Faculty of Arts and Science	31.003.1	WGPA
Faculty of Commerce and Administration	61.20.5	WGPA
Faculty of Engineering and Computer Science	71.10.3	WGPA
Faculty of Fine Arts	81.20.4	No. of Failures

These regulations are liable to modification in the case of students transferring either between Faculties or from another university.

II. Annual Weighted Grade Point Average

An Annual Weighted Grade Point Average (WGPA) is calculated at the end of each academic year, provided that a minimum of twelve (12) credits has been attempted. If fewer than twelve (12) credits have been attempted, these will be carried forward and included in the assessment for the following academic year. An academic year includes a Summer and its subsequent Fall and Winter terms. The WGPA is calculated only for courses recorded since entry into the current programme. Special regulations may be applied for graduating students. These will be specified in each Faculty's regulations (see I. above).

A grade obtained as a result of writing a supplemental or replacement examination and/or of completing the work for a course with an INC or MED notation is included as part of the assessment period in which it is recorded.

In the Faculty of Engineering and Computer Science, any course which is a requirement for admission to a programme will not be counted unless specifically listed on the student's admission letter.

The WGPA is calculated as follows:

The sum of the credits for each course attempted multiplied by the grade points obtained for it, as specified in §16.3.2 of the Calendar, divided by the total credits attempted, i.e.

$$\text{WGPA} = \frac{\Sigma\ (\text{course credits} \times \text{grade points})}{\Sigma\ (\text{credits attempted})}$$

Example:

Course	Grade Achieved	Credit Value		Grade Points*		Weighted Grade Points
AA	D	3.00	X	1.00	=	3.00
BB	C+	3.00	X	2.30	=	6.90
CC	B	2.00	X	3.00	=	6.00
DD	A-	6.00	X	3.70	=	22.20
EE	F	3.00	X	0.00	=	0.00
	Total Credits Attempted	17.00			Total Weighted Grade Points	38.10

$$\text{WGPA} = \frac{38.10}{17.00} = 2.24$$

* *As detailed in §16.3.2*

III. Qualifying Programme and Visiting Students

Students registered in Qualifying Programmes or as Visiting Students are subject to the regulations of the Faculty in which they are registered.

IV. Independent Students

1. Independent students are subject to the same grade point average requirements as students registered in programmes offered by the Faculty of Arts and Science (see §31.003.1).
2. Independent Students who are classified as Failed must obtain permission to re-register from the Registrar.

V. Regulations for Failed and Conditional Standing Students

1. Failed students or students assessed as being in Conditional Standing are neither eligible to write supplemental examinations nor entitled to late completion of courses.
2. Undergraduate students who are classified as Failed may not re-register as Independent Students.

VI. Academic Records

Failed Standing is noted on the student's record and the official transcript.
Conditional Standing is noted on the student's record only.

16.3.8 REGULATIONS FOR COURSES NOTATED AS INCOMPLETE

1. A student in good standing is eligible to complete a course with an INC notation subject to the limitation dates (see 4. below).
2. A failed student, or a student with conditional standing is ineligible to complete a course with an incomplete notation.
3. A student is ineligible to complete a course with an incomplete notation in a course graded "R".
4. Application for late completion form must be submitted by:

Fall-term courses: February 1
Winter-term courses: June 15
Summer-session courses: October 1

5. The limiting dates for the submission of late work are:

a) for Fall-term courses not later than April 1.
b) for all other courses in the Regular Session not later than August 1.
c) for all courses in the Summer Session not later than November 1.

16.3.9 REPETITION OF COURSES

1. In general a student may repeat a failed course only once. However, should a course required for a programme be failed a second time, a student must appeal to the appropriate student request committee for permission to take the course a third time, or for permission to replace the required course with another. Unless such permission is granted, the student will not be allowed to continue in the University toward that programme and/or degree.
2. A student who has received credits for a completed course may not write the supplemental examination.
3. A student who has received credit for a completed course may repeat a course for personal reasons, for instance, an external requirement. The student's record will reflect the new grade, however, there will be no credit value associated with the grade. The original entry will be used for graduation averaging purposes, except as provided by the special regulations for the Faculty of Engineering and Computer Science.
4. Students who fail a course that is specifically required for a degree must take the course during the session for which they next register. If a required course is taken for the first time during the Summer Session and is failed, students may postpone their registration for repetition of the course until the session following the regular scheduled supplementary examination period for Summer Session courses.

16.3.10 CODE OF CONDUCT (ACADEMIC)

I. Preamble

1. In order to maintain the integrity of the academic processes of the University, all students are expected to be honest in all their academic endeavours and their relationships with the University.
2. This Code defines the offences that constitute academic misconduct and sets out the procedures used to deal with those offences.
3. Wherever there is doubt or ambiguity regarding any provision in this Code, or the procedure to be followed, that interpretation or procedure is adopted which appears most equitable and consistent with its general purposes and philosophy. Except for those terms defined hereunder, the terms used in this Code have their usual meanings.

II. Definitions

In this Code, unless the context indicates otherwise:

1. *Academic misconduct* means any form of dishonest behaviour related to the obtainment of academic gain or to the avoidance of evaluative exercises.
It includes, but is not limited to, cheating, plagiarism, personation at an examination, falsification and multiple submission, and applies to any form of evaluative exercise.
2. *Chair* means the Chair of the department or the Head of an equivalent academic unit in which the alleged act of academic misconduct occurred.
3. *Cheating* means any dishonest or deceptive practice relating to an examination, test or other evaluative exercise. It may include, but is not limited to:

a) possessing or making use of a book, paper, script, writing, drawing or other material or equipment not expressly authorized by those conducting the examination;

b) possessing a device allowing access to or use of any of the materials or equipment identified in sub-paragraph a);
c) communicating with anyone other than an invigilator during an examination;
d) tearing or mutilating an examination booklet, or taking a booklet from the examination room.
4. *Dean* means:
a) the Dean of the Faculty offering the programme in which the student is, or seeks to be, registered; or,
b) if the student is not registered in a programme, the Dean of the Faculty providing the course concerned; or, in the event that the offence is not related to a particular course, the Dean of the Faculty providing the majority of courses on the student's record; or,
c) if the student is a graduate student, the Dean of Graduate Studies.
5. *Examination* means any invigilated evaluative exercise.
6. *Falsification* means falsifying or forging academically related documents or other records or using such documents. Academically related documents and other records include, but are not limited to:
a) University records, transcripts, or other academic data;
b) documents issued by a physician or by another person or institution and submitted to the University.
7. *Hearing Committee:* If the student is an undergraduate student, the hearing committee is composed of:
a) a Chair, appointed by the Dean; and,
b) two faculty members and two undergraduate students, all appointed by the Dean from a panel made up of full-time faculty members named by Faculty Council, and of undergraduate students registered in the Faculty, named by the appropriate student association.
If the student is a graduate student, the Hearing Committee is made up of three faculty members and two graduate students appointed by the Board of Graduate Studies. The Dean appoints a Chair of the Hearing Committee from among the committee members.
8. *Instructor* means the instructor of the course in which the alleged act of academic misconduct occurred.
9. *Multiple submission* means submitting a piece of work or an important part of a piece of work for credit when that work has been, or is concurrently being, submitted for credit in another course, without the knowledge and permission of the instructor(s) involved.
10. *Personation* means assuming the identity of another person or knowingly having another person assume one's own identity at an examination or other evaluative exercise.
11. *Plagiarism* means the presentation by a student of the work of another person as his or her own; it includes copying, translating and paraphrasing without acknowledgment of the source.
12. *Sanction* means:
a) reprimand;
b) work to be resubmitted with appropriate changes;
c) failing grade in the work submitted; or
d) failing grade in the course for which the work was submitted.
13. *Year* means:
a) a period beginning on September lst and ending on August 3lst if the academic misconduct occurred during the Regular Session; or
b) a period beginning on May lst, and ending on April 30th, if the academic misconduct occurred during the Summer session.

III. Offences

1. Academic misconduct is an offence under the present Code. It shall be dealt with in accordance with the procedure set out hereunder.
2. Any attempt, conspiracy, participation or possession related in any way to academic misconduct is also an offence under the present Code and shall be dealt with in accordance with the procedure set out hereunder.

IV. Procedure

A. PROCEDURE RELATING TO PLAGIARISM AND MULTIPLE SUBMISSION

1. *Instructor meets with student:* If an instructor has reason to believe that a student has committed an act of plagiarism or multiple submission, the instructor informs the student and discusses the circumstances of the matter with him or her.
2. *Agreement as to satisfactory resolution reached:* When an agreement can be reached between the instructor and the student as to a satisfactory resolution, which may include an appropriate sanction, the matter is settled.
3. *Matter referred to the Chair:* If no satisfactory resolution has been reached and the instructor is still of the opinion that the student has committed an act of plagiarism or multiple submission, the matter is referred in writing to the Chair.
4. *Meeting with the Chair:* The Chair meets with the instructor and the student in order to discuss the circumstances of the matter.
5. *Agreement as to satisfactory resolution reached with Chair:* If an agreement can be reached between the Chair, the instructor and the student as to a satisfactory resolution, which may include an appropriate sanction, the matter is settled.
6. *Formal charge:* If no satisfactory resolution has been reached, and the Chair is of the opinion that the student has committed an act of plagiarism or multiple submission, the Chair shall so inform the Registrar and recommend that a formal charge of academic misconduct be laid in accordance with the provisions set out below. The Chair shall send a copy of such recommendation to the Dean.

B. PROCEDURE RELATING TO FORMAL CHARGES OF ACADEMIC MISCONDUCT

1. A person who suspects a student of academic misconduct delivers to the Registrar as soon as possible a written report setting out the grounds for the suspicion, together with any statement made by the student

and other relevant material. The Registrar shall send a copy of this report to the Dean.

2. The Registrar shall consider if the laying of a charge of academic misconduct is appropriate. If the Registrar decides to lay a charge, the procedure set out in the following subsections shall apply.

If the Registrar decides not to lay a charge, the Dean may refer the matter to the Vice-Rector, Academic, who may direct that a charge be laid.

When a decision is made not to lay a charge, the Registrar or the Vice-Rector, Academic, as the case may be, informs the student in writing.

3. *Form of the charge:* The formal charge must be precise and substantiated; it is made in writing, dated and signed, and is sent to the Dean.

4. *Copy of formal charge sent to student:* The Dean sends a copy of the formal charge to the student and inquires in writing whether the charge is admitted or denied by the student.

5. *Student answers charge:* The student has twenty-one (21) calendar days to admit or deny the charge in writing.

6. *Student admits charge:* When the student admits the charge, the Dean applies the penalty set out in Article V below.

7. *Student does not admit charge or fails to respond:* When the student does not admit or fails to respond to the charge, the Dean arranges for the setting up of a Hearing Committee and gives to the student a written fourteen (14) calendar days notice of the date, time and location of the hearing.

Said hearing is to be held as soon as reasonably possible after the laying of the charge, and in any event no later than ninety (90) calendar days after the laying of the charge.

If the said hearing does not take place within the prescribed ninety (90) calendar days, through no fault of the student, the complaint fails and the charge against the student is withdrawn.

8. *Conduct of the hearing:* The student and the Registrar (or a delegate of the Registrar), in the case of a charge of cheating or other academic misconduct, have the right to be present at the hearing of the charge, to address the committee, and to present witnesses. In the case of a charge of plagiarism, or multiple submission, the student, the instructor and the Chair have such a right. The student may be accompanied by an adviser from within the University who may speak on his or her behalf. Following the hearing the committee will deliberate in private.

9. *Written and reasoned report sent to Dean:* The Hearing Committee sends a written and reasoned report to the Dean on whether or not the student acted as charged. Should the student be found to have acted as charged, the Hearing Committee may recommend one or more of the penalties set out in Article V below.

10. *Dean imposes penalty:* If the Hearing Committee upholds the charge or part thereof, the Dean shall impose the penalty set out in Article V hereunder, depending on the circumstances of the case.

11. *Dean informs student:* The Dean sends to the student and the Registrar and, if appropriate, to the instructor and the Chair a copy of the report of the Hearing Committee and, where applicable, a written statement of the penalty imposed. In cases where the said penalty is different from one recommended by the Hearing Committee, the Dean provides the reasons in support of the decision.

The Dean also informs the student of his or her right of appeal, indicating the date and time of the deadline for an appeal to be filed and the name of the person to whom a notice of appeal is to be delivered.

12. *Appeal to the Senate Appeals Committee on Academic Misconduct (SACAM):* The student and the Registrar have a right of appeal to SACAM against the decision of the Hearing Committee or the penalty, or both. The notice of such appeal is made in writing within twenty-one (21) calendar days of the sending of the decision and forwarded to the Secretary of Senate. It must specify the grounds of appeal.

If the student or the Registrar appeals the penalty, the student may apply to SACAM for permission to be exempted from the penalty imposed by the Dean pending the outcome of the Appeal. Such an application must be treated as an urgent matter and a decision made within fourteen (14) calendar days of the receipt of the application. The decision to exempt the student may be made subject to such terms and conditions as SACAM deems appropriate.

13. *Hearing by SACAM:* The hearing by SACAM must be held as soon as reasonably possible after rendering of the decision appealed from, but in any event within ninety (90) calendar days of the date of the decision rendered by the Dean. The Secretary gives the student a fourteen (14) calendar days written notice of the day,time and location of the hearing.

Subject to the provisions set out in Article VII, paragraph 1, if through no fault of the student, the appeal hearing does not take place within the ninety calendar days herein prescribed:

a) when the student is the party appealing the decision, the appeal will be considered as upheld;

b) when the Registrar is the party appealing the decision, the complaint fails and the charge is withdrawn.

14. *Decision of SACAM:* SACAM may confirm, quash or modify the decision or the penalty under appeal and its decision is final. It is made in writing and must be reasoned; it is sent to the student, to the Registrar, and to the Dean.

V. Penalties

1. *Imposition of Penalties:* Where a formal charge has been laid and a student admits to or is found guilty of academic misconduct, the penalty is one or more of the following:

a) *failing grade*—a failing grade for the course in which the academic misconduct occurred;

b) *failing grade and further ineligibility*—a failing grade and ineligibility for a supplemental examination or any other evaluative exercise for the course;

c) *additional courses to be followed*—the obligation to take and pass courses of from three to twenty-four credits in addition to the total number of credits required for the programme; the courses to be taken may be specified;

d) *suspension*—suspension from the University for the remainder of the year;

e) *suspension for additional period*—suspension for the remainder of the year and for an additional period of not more than one (1) year;

f) *expulsion*—expulsion from the University.
2. *Application for readmission:* If a suspended student fails the year in which he or she was suspended and wishes to be readmitted thereafter, that student must apply for readmission.
3. *Repetition:* Should a student either admit or be found to have committed a second act of academic misconduct, that student shall be expelled from the University.
4. *Confirmation by Rector:* A sentence of suspension or expulsion is subject to confirmation by the Rector.

VI. Special Provisions Governing the Conduct of Examinations

1. Every examination paper expressly lists the materials and equipment that a student is permitted to have and use during the examination and indicates any special conditions relating to the examination.
2. Except if expressly authorized by those conducting the examination, a student in the examination area cannot speak or otherwise communicate with any person other than an invigilator.
3. A student who is suspected of academic misconduct during an examination is so informed by the invigilator and is required to leave the examination area immediately. The invigilator keeps the student's examination booklet as well as any other evidence relating to the suspected act of academic misconduct.
4. In examinations invigilated by the Registrar's Office, the student is requested in a written statement to choose one of the following options:
a) to withdraw from the examination with the understanding that if a charge of academic misconduct is not laid or upheld, the student will be permitted to take another examination for the same course at a mutually agreed time;
b) to continue the examination under controlled conditions in another location, in which case the invigilator provides a fresh examination booklet for the purpose and allows additional time for the examination to compensate for any time lost.
The student is asked to sign a statement indicating which option was chosen. If the student does not indicate a choice by signing the statement, he or she is considered to have chosen to withdraw from the examination.
5. In the case of examinations not invigilated by the Registrar's Office, the student will be required to withdraw from the examination, but will be permitted to request permission to take another examination on the same subject-matter. Such permission will be granted through the Office of the Registrar, which will arrange an alternative evaluative exercise within fourteen (l4) calendar days of the student having been asked to withdraw from the examination.
If the charge of academic misconduct is not laid or is not upheld, and if another examination on the same subject-matter has not already been written, the student will be permitted to arrange, through the Office of the Registrar, to take another examination at a mutually agreed time.
6. It is the duty of an invigilator to report to the Registrar any apparent incident of suspected academic misconduct.
7. As soon as possible, the invigilator delivers a written statement setting out the grounds for his or her suspicions to the Registrar. The invigilator attaches the student's examination booklet, the student's statement, if any, and other relevant material.
8. If anyone grading an examination finds reason to suspect a student of academic misconduct, he or she delivers a written statement explaining the reasons for the suspicion to the Registrar, as soon as possible. The student's examination booklet and any other relevant material is attached.

VII. Final Provisions

1. *Extension of Delays:* In exceptional circumstances where the appellant can demonstrate that it was impossible to file an appeal within the prescribed delay, SACAM may allow the appeal to be filed past the deadline.
If the ninety (90) calendar day deadline for hearing a case before a Hearing Committee or SACAM falls on a date in July, August or September, the Committee concerned may decide to extend the deadline to the same date in the month of October. The Chair of a Hearing Committee or the Secretary of Senate, as the case may be, notifies the student and other interested parties of the extension.
2. *Written notice:* a) Any written notice addressed to a student under this Code is sent by registered or certified mail at the last address given to the University.
b) A student involved in proceedings under the present Code must provide a current mailing address to the University, and must notify the University promptly of any change of address.
c) Students are advised to send all correspondence under this Code by Registered or Certified Mail.

SECTION 17

RIGHTS AND RESPONSIBILITIES

17.1 COMPLAINT PROCEDURES
- 17.1.1 Statement of Governing Principles
- 17.1.2 The Ombuds Office
- 17.1.3 Code of Conduct (Non-Academic)
- 17.1.4 Supervisory Board

17.2 POLICY ON SEXUAL HARASSMENT

17 Rights and Responsibilities

Ombudspersons
SUZANNE BELSON
BEATRICE PEARSON

Code Administrator
H. JOHN RELTON

17.1 Complaint Procedures

NOTE: Article 3 of the Complaint Procedures is under review as this calendar goes to press. It may be modified prior to publication. For information contact the Code Administrator or the Ombuds Office.

Concordia University believes it important to set out the rights, freedoms and responsibilities of its members: i.e. its academic and non-academic staff and its students. The section which follows articulates the governing principles of those rights and responsibilities, and outlines the mandates of the Ombuds Office and the Code of Conduct (Non-Academic) designed to ensure their proper recognition. The Ombuds Office provides mechanisms for dealing informally with complaints and inquiries about University-related matters. The Code of Conduct (Non-Academic) defines procedures for receiving and responding to formal complaints, with the exception of those pertaining to sexual harassment, for which there is a specific procedure outlined in the "Policy on Sexual Harassment". (See §17.2.)

This section does not replace or supersede complaint, grievance or appeal procedures set out in any Collective Agreement signed by the University, the Code of Conduct (Academic), the University Calendars or the University Policy Manuals.

17.1.1 STATEMENT OF GOVERNING PRINCIPLES

1. The University is an institution of higher education dedicated to the pursuit of truth and the advancement and dissemination of knowledge. All those who study, teach or work at the University must be concerned with maintaining the freedoms essential for those purposes.

2. All members of the University must be free to pursue their work, study, creative activity or research without undue interference. This includes freedom from any form of violence, harassment or intimidation; freedom to teach, to create and to learn; to speak freely; to associate and to assemble; to write and to publish. All members have the right to the safeguard of their dignity, reputation and honour, confidentiality of personal information, respect for property whether personal or owned by the University and access to University premises as required.

3. Members of the University shall have regard in particular for the rights of other members to: freedom from discrimination on such grounds as sex or sexual orientation, religious or political beliefs, racial or ethnic origin; freedom from violence, intimidation, and sexual harassment; the safeguard of dignity, reputation and honour; access to University premises; respect for property, whether personal or owned by the University for the benefit of the community; confidentiality of personal information.

   3.1. The rules of natural justice will apply to all hearings under this code.

4. Members of the University with supervisory authority of any kind are to use such authority, both on campus and off, solely for the purposes stated or implied in University policies, and with due regard to the overall aims and purposes of the University.

5. Disciplinary authority in the University is vested in the Board of Governors.
   It remains the right, as well as the duty, of academic staff members and administrators to exercise disciplinary authority in areas or matters within their own jurisdiction. Faculty members are expected to take whatever immediate action is needed to ensure the continuing order of their classes and administrators to take whatever immediate action is required to ensure the proper functioning of the services or areas for which they are responsible.
   A person against whom such action is taken and who believes the action unjustified may seek recourse through the Ombuds Office or the Code Administrator.

6. Only the Rector, as chief administrative officer of the University, or his or her duly appointed delegate, has the right to suspend temporarily a student or a member of the academic or non-academic staff, consequent upon action taken in line with paragraph 2 of Article 5. In the event of such suspension, procedures for final disposition of the situation will be set in motion as soon as possible.

7. All members of the University are subject to the laws of the land and have recourse to those laws. The same holds true for the University as a corporate entity. Hence, any member of the University may take legal action irrespective of the procedures cited below. Similarly, the University itself may seek legal resolution should it see fit.

8. Should any doubt or ambiguity arise regarding any provision or procedure in this document, that interpretation or procedure which appears most equitable and consistent with its governing principles and the principles of natural justice shall be adopted.

9. Whenever an official of the University is unable to exercise the functions named herein, these shall be carried out by that person's replacement.

17.1.2 THE OMBUDS OFFICE

The Role of the Ombuds Office

10. The mandate of the Ombuds Office includes the right of inquiry into the application of any policy, rule or procedure except those covered by a Collective Agreement with a certified bargaining unit. The functions of the Ombudspersons are:
    a) To inquire into University-related grievances or complaints at the request of a member of the University or any person seeking to become a member, in circumstances directly affecting the application to become a member.
    b) To inquire on their own initiative, if they collectively see fit, into a matter that has not been the subject of a specific grievance or complaint.
    c) To bring their findings to the attention of those in authority and to make whatever recommendations they judge appropriate, and to whom-ever within the University they feel should receive them. Recommendations of the Ombudspersons may bear either on the actions or decisions of an individual or a group, or on the policies, rules and procedures which gave rise to them.
    d) To bring to the attention of those in authority any policies, rules or procedures which appear unclear or inequitable or which might jeopardize the rights or freedoms of any member of the University.
    They may suggest changes to the existing policies, rules or procedures or offer advice on the development of new regulations; however, the Ombudspersons have no actual authority in regard to any policy, rule or procedure.
    e) To advise members of the University community of their rights and responsibilities, and of the procedures available to pursue whatever concern or complaint they may have.

Concerns of the Ombuds Office

11. In dealing with inquiries, the Ombudspersons shall be concerned that all members of the University are dealt with and deal with others fairly; more specifically, that:
    a) decisions of members of the University are made fairly and with reasonable promptness;
    b) procedures used to reach decisions are adequate and the criteria and rules upon which such decisions are based are appropriate;
    c) procedures and criteria used in making decisions are clearly communicated to those affected.

Appointment to the Ombuds Office

12. There shall be one full-time and two part-time Ombudspersons. They shall be appointed by the Rector, acting on the recommendations of the Supervisory Board, Code of Conduct (Non-Academic).

13. The full-time Ombudsperson shall be appointed initially for a period of two years followed, upon recommendation of the Supervisory Board, by further terms of five years. During the fourth year of each term, the Supervisory Board shall appoint an appraiser, external to the University, who shall review the operations of the Ombuds Office and make recommendations to the Supervisory Board.

14. Part-time Ombudspersons shall be appointed for two years, renewable upon the recommendation of the Supervisory Board.
    The part-time Ombudspersons:
    a) shall already be in the employ of the University; and
    b) shall be partially released from their other duties or be appropriately compensated.

Procedures of the Ombuds Office

15. The Ombudspersons shall have immediate access to all University records, reports or documents other than those which cannot be released for reasons of confidentiality. Ombudspersons may appeal the decision of an officer of the University with regard to confidentiality to the Rector, unless the Rector is the official in question, in which case the appeal shall be made to the Board of Governors.

16. On the conclusion of an inquiry, the Ombudspersons shall advise the parties to a complaint of their findings and any recommendations.

17. They may refuse to take up any case where they judge their intervention would be inappropriate, and may withdraw from a case if continued involvement seems ill-advised.

18. If an Ombudsperson refuses to take up a case or withdrawsfrom a case, he or she shall, on request provide the applicant with a written statement of the reasons.

19. Members of the Ombuds Office are free to decide who, among them shall deal with any particular inquiry or case, and whether to deal with a case individually or jointly.

20. Ombudspersons shall avoid involvement in cases where there may be conflict of interest.

Confidentiality

21. Ombudspersons shall respect the confidentiality of all applicants and consequent inquiries or recommendations.

22. Should the pursuit of an inquiry necessitate the disclosure of details that identify an applicant, the applicant shall be informed. Any disclosure shall be limited to those who have a need to know.

23. Should an applicant decide to withdraw an application in order to protect his or her anonymity, the Ombudspersons shall respect this decision.

24. The Ombudspersons shall respect the confidentiality of any confidential information or materials to which they have access.

25. Should the Ombuds Office consider that the response to its recommendations has been unsatisfactory, it is entitled to make its recommendations public, provided always that, subject to Article 22, the confidentiality of the applicants is respected.

Annual Report

26. By September 15, the Ombuds Office shall present to the community, a report covering the nature and extent of the Office's operations during the preceding academic year.

17.1.3 CODE OF CONDUCT (NON-ACADEMIC)

Jurisdiction

27. Any member of the University or any person seeking to become a member, in circumstances directly affecting the application to become a member, may make a complaint about a University-related matter under the Code.

28. A complaint may be made by a member individually or on the University's behalf.

29. A complaint may be made against the University itself, or against a department of the University, or against an individual member of the University.
(Persons working on University premises under contractual agreements between the University and their direct employers, such as catering and maintenance employees, are not members of the University. Complaints against such persons should be lodged with their employers or with the University administrator responsible for the contract.)

30. A complaint may be made about any violation of the governing principles of this Code taking place on University premises, be they rented or owned, or in the course of any activities conducted by, or on behalf of the University, on other premises.

31. The complaint normally shall be delivered as soon as possible, usually within two months of the alleged act, incident or other cause or its discovery. This period may be extended at the discretion of the Code Administrator.

32. The Code Administrator shall refuse to receive a complaint or to continue the processing of a complaint when the complainant, the respondent or the cause of the complaint itself does not come within the jurisdiction of the Code.

33. The Code Administrator shall refuse to receive a complaint when the Code Administrator deems that a complainant does not have a direct involvement in the complaint or that the complaint is frivolous, or made in bad faith.

34. In case of such refusal, the Code Administrator shall notify the complainant and give the reasons for the refusal.

35. Within fourteen (14) working days of the date of transmission of the Code Administrator's reasoned refusal, the complainant may appeal the decision of the Code Administrator to the Hearing Board by delivering a statement setting out the reasons for the appeal to the Office of the Code Administrator.

36. Upon receipt of such an appeal, the Code Administrator shall forthwith refer the complaint, the statement of appeal, and the notice of refusal to the Hearing Board which may confirm, or reverse the decision of the Code Administrator.

37. With seven (7) working days of the receipt of an appeal, the Hearing Board shall either confirm or reverse the Code Administrator's decision to refuse the complaint. If the Hearing Board confirms the Code Administrator's decision it shall notify the complainant and the Code Administrator. If the Hearing Board reverses the Code Administrator's decision, it shall notify the complainant and the Code Administrator who shall then proceed with the complaint in the normal way, except that the Code Administrator shall not investigate the complaint personally.

Appointment and Responsibilities

38. There shall be a Code Administrator appointed by the Rector on the recommendation of the Supervisory Board, Code of Conduct.

39. The Code Administrator shall receive all formal complaints, ensure that all formal procedures under this Code are properly followed, and explain the procedures to all concerned parties.

40. The Code Administrator shall establish and call Hearing Boards.

41. Any delay mentioned in this Code may be extended in exceptional circumstances by the Code Administrator.

42. The Code Administrator shall present to the community an annual report covering the nature and extent of the operations during the preceding year.

Complaint Procedures

43. It is the policy of the University to encourage attempts to resolve complaints informally or through the normal administrative processes of the University. Recourse to the formal process described below should be utilized only when the less formal or administrative process has failed to resolve the complaint.

Informal Resolution Process

44. If no previous attempt to resolve the complaint through normal administrative channels has been made, the Code Administrator may attempt to resolve it personally or may refer the complaint to the Appropriate Authority for informal resolution. With the parties' agreement, the Code Administrator or the Appropriate Authority may request the assistance of a mediator.

45. If, within fourteen (14) working days, a resolution is reached, the terms of the resolution shall be set out in a report which both parties shall sign, agreeing to abide by the terms and conditions set out in the report. A file containing a copy of the report shall be maintained by the Code Administrator until such time as the terms and conditions contained in the report are fulfilled.

46. Failure to comply with any of the terms of the resolution shall constitute grounds for a formal complaint under the Code.

47. If, within fourteen (14) working days, no resolution is reached:
    a) the delay may be extended for another period of fourteen (14) working days with the consent of the Code Administrator and the parties; or,
    b) the Code Administrator shall refer the complaint to the Hearing Board.

48. Unless otherwise stated in the report, the resolution shall be kept confidential.

Formal Resolution Process

49. Any person who wishes to make a formal complaint shall deliver a written, signed and dated complaint to the Code Administrator.

50. The party complained against (hereinafter called the respondent) shall be identified and the nature of the complaint shall be stated with precision, detailing date, time and place.

51. The Code Administrator shall forward a copy of the complaint to the respondent.

52. Complaints shall be dealt with as soon as possible, and generally within fourteen (14) working days of receipt.

Notice

53. The convener of any meeting or hearing shall give all concerned parties at least seven (7) working days notice in writing of such meeting or hearing.

54. In the case of a complaint about an incident which took place in a University residence, and where one or more of the parties lives in residence, a hearing or meeting may be held with only two days working notice to the parties and a decision delivered within three working days.

Hearings

55. All hearings shall be conducted with due regard to the principles of natural justice.

56. All hearings shall be closed and confidential unless the parties have consented in writing to the attendance of members of the University community, or unless the Hearing or Appeal Board, at the request of one of the parties, decides to admit members of the University community.

57. The parties shall be given the opportunity to make any relevant representations, in person or in writing as they see fit, and, at the Hearing Board level, to present witnesses.

58. The parties have the right to be accompanied by an adviser from within the University who may speak on their behalf.

Decisions

59. All decisions rendered under this Code shall be reasoned, signed and dated.

Appropriate Authority

60. When the Code Administrator refers a complaint to an appropriate authority for informal resolution, the following shall apply:
    a) A complaint against a member of faculty or a person employed in a Faculty or the Graduate Studies Office shall be forwarded to the appropriate academic dean.
    b) A complaint against a student shall be forwarded to the appropriate academic dean, or to the Director of Continuing Education.
    c) A complaint against the Rector shall be forwarded to the Chairman or the Chairwoman of the Board of Governors.
    d) A complaint against any other employee of the University shall be forwarded to the senior administrator (Rector, Vice-Rector, Secretary-General, Associate Vice-Rector or Director as the case may be) to whom the person complained against reports most directly.

61. If for any reason, such as bias or conflict of interest, the Appropriate Authority declines to or is unable to deal with a complaint, the Code Administrator shall refer it to the Appropriate Authority's superior.

62. The Appropriate Authority shall acknowledge receipt of the complaint as expeditiously as possible and shall send copies of the acknowledgement to the parties to the complaint and the Code Administrator.

Hearing Board

63. The Hearing Board shall consist of three (3) persons drawn from a Standing Panel of twenty-four (24) members, comprised of three separate pools of six (6) academic staff members (up to two of whom may be part-time faculty), six (6) non-academic staff members and twelve (12) students. The members of the Hearing Board will select a chair from amongst themselves.
    a) If both the complainant and the respondent are students, the Hearing Board shall be composed of three (3) students.
    b) If both the complainant and the respondent are academic staff members, the Hearing Board shall be composed of three (3) academic staff members.
    c) If both the complainant and the respondent are members of the non-academic staff, the Hearing Board shall be composed of three (3) non-academic staff members.
    d) In all other cases, the Hearing Board shall be composed of one representative of the same constituency as the complainant, one representative of the same constituency as the respondent and one other person from the pools.

64. The Standing Panel shall be established in the following manner:
    a) The pool of students shall be named, after a public call for candidates, by a nominating committee composed of four representatives of the Concordia University Students' Association and one representative of the Graduate Students' Association.
    b) The pool of academic staff members shall be named by the Concordia University Faculty Association and the Concordia University Part-time Faculty Association.
    c) The pool of non-academic staff members shall be named by the Concordia University Electoral College.
    d) All appointments shall be for one year renewable. Every effort shall be made to achieve gender balance for each pool.

65. The decision of a Hearing Board shall be by majority vote.

66. The Hearing Board shall deliver its decision to the Code Administrator who shall forward it to the parties.

Sanctions

67. The Code Administrator, the Appropriate Authority,the mediator, or the Hearing Board may impose one or more of the following sanctions:
    a) a verbal or written reprimand;
    b) imposed conditions, with or without a deposit not exceeding $200.00, returnable at a specific date. Such deposits may be forfeited should any conditions be violated;
    c) a fine not exceeding $100.00;
    d) payment not exceeding $1000.00 as compensation for injury or damage to or loss of property;
    e) exclusion from an area or function of the University for a stated period of time. If this exceeds twelve months, the sanction shall be reviewed by the Hearing Board at the end of each twelve-month period. (This sanction does not encompass the authority to suspend from any academic activity);
    f) a combination of any of the above;
    g) community service, as an alternative to any or all of the above; or
    h) subject to confirmation by the Rector, suspension, expulsion or dismissal.

68. Should the sanction be covered by a Collective Agreement or a University policy, the provisions of that Collective Agreement or policy shall apply.

69. In the event that the respondent fails to comply with any sanction imposed under this Code, the Code Administrator, after notifying the respondent, may impose additional conditions or sanctions as mentioned in Article 66, or refer the matter to the Hearing Board for hearing and determination of additional sanctions.

Appeals

70. The complainant or the person complained against wishing to appeal the decision or the sanction or both shall apply in writing to a panel of three (3) or five (5) members of the Appeals Committee of the Board of Governors for the authorization to lodge an appeal. The said panel shall decide whether an appeal may be heard, having regard to the circumstances of each case. The application in writing shall be submitted to the Secretary of the Appeals Committee within fourteen (14) days of the rendering of the decision appealed against. The panel to hear a specific application shall be appointed, and the number of members determined, by the Chair of the Appeals Committee.

71. Such a request for authorization to appeal may be based only on the grounds of discovery of new evidence following the rendering of the decision of the Hearing Board, or the presence of serious and prejudicial procedural defects or a breach of natural justice. The written request shall state in clear and precise terms the grounds on which the appeal is based.

72. If the authorization to appeal is granted, the appeal shall be heard either by the same panel or a new panel, as determined by the Chair of the Appeals Committee.

73. The Appeals Committee shall be a Standing Committee of the Board of Governors, whose mandate is to hear the appeals upon authorization granted by it, in accordance with the above paragraphs.

74. When an appeal has been authorized by the Appeals Committee in accordance with the above provision, the Secretary of the said Appeals Committee shall send without delay copies of the decision authorizing the appeal to the opposite party and to the Code Administrator.

75. The Appeals Committee has the authority to confirm, reverse or modify the decision under appeal or to require a new hearing of the complaint.

76. The decision of the Appeals Committee shall be signed, dated and reasoned and shall be delivered by the Secretary of the Board of Appeal to the Code Administrator and all interested parties.

77. The decision of the Appeals Committee shall be final.

17.1.4 SUPERVISORY BOARD

78. The Supervisory Board shall be concerned with all aspects of the Code of Conduct (Non-Academic) and the University Ombuds Office.

79. There shall be seven (7) members appointed by the Board of Governors; two (2) student representatives, two (2) academic staff representatives, two non-academic staff representatives, with a delegate of the Rector serving as Chair. The student members shall be nominated jointly by the student associations, the academic staff members by the Concordia University Faculty Association, and the staff members by the Concordia University Electoral College.

80. Appointments shall be for two years, and shall be renewable.

81. The Supervisory Board shall review the reports of both the Code Administrator and the Ombuds Office, and make any recommendations it judges appropriate to the Rector and Board of Governors, including recommendations for amendment to the Code.

82. A member of the University community may apply to the Supervisory Board to review the operation of any aspects of the Code of Conduct (Non-Academic) or the University Ombuds Office. In such instances, the responsibility of the Supervisory Board shall be to ensure that the procedures have been properly followed.

83. Three (3) members of the Supervisory Board may require at any time that the Board meet to review any aspect of these procedures.

17.2 Policy on Sexual Harassment

Statement of purpose

1. The University considers sexual harassment in all its forms, whether subtle or overt, to be a serious offence. Sexual harassment is a form of discrimination, of violence or both. It infringes on fundamental human rights and undermines personal dignity and integrity. It interferes with the work, study and academic environment of the University.

2. Concordia University endeavours at all times to provide a working and learning environment that is supportive of scholarship and research and of the fair treatment of all members of the University. The basis for interaction among all members of the University must be mutual respect, trust, cooperation and understanding.

3. The University does not condone behaviour, such as sexual harassment, that undermines the freedom, dignity, trust or productivity of any faculty, staff, or student.

4. Although men and women can be victims of sexual harassment, women are most often the targets of these practices. Sexual harassment can be a form of abuse of authority, and, in the case of women a manifestation of the perception of women's subordinated societal status. It can be exacerbated by discrimination on other grounds such as disability, race, religion, ethnic origin or sexual orientation. It is a serious equity issue.

5. The University has the legal and moral responsibility to ensure an environment free from sexual harassment for all its members.

6. To fulfil this responsibility, the University defines, in this policy, the term sexual harassment, provides a choice of procedures for resolution, and outlines a range of disciplinary measures up to and including dismissal or expulsion. An infrastructure to promote the prevention of incidents of sexual harassment through education is established.

Definition*

7. Conduct of a sexual nature such as, but not limited to, sexual assault, verbal abuse or threats of a sexual nature, unwelcome sexual invitations or requests, demands for sexual favours, or unwelcome and repeated innuendos or taunting about a person's body, appearance or sexual orientation, constitutes sexual harassment when:
    a) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, academic status or academic accreditation; or,

b) submission to or rejection of such conduct by an individual is used as the basis for employment, or for academic performance, status or accreditation decisions affecting such individual; or,
c) such conduct interferes with an individual's work or academic performance; or,
d) such conduct creates an intimidating, hostile or offensive working or academic environment.

** This definition is the same as that adopted in May 1989 by the Canadian Association of University Teachers (CAUT) in its "Policy on Professional Ethics and Professional Relationships".*

Jurisdiction*

8. The following individuals or bodies may initiate a complaint:
   a) any member of the University;
   b) the University, on its own behalf or on behalf of one of its members, if it chooses hearings as the procedure for resolution;
   c) any duly constituted University association or union, on behalf of one of its members, if it chooses hearings as the procedure for resolution; and,
   d) any person seeking to become a member of the University, in circumstances directly affecting one's application to become a member.

9. The following individuals or bodies may be the subject of a complaint:
   a) any member of the University;
   b) the University; and,
   c) any duly constituted University association or union.

10. Members of the University are defined as faculty, staff and students.

11. Complaints may be made about any violation to this policy taking place on University premises, be they rented or owned, or in the course of any activities conducted by or on behalf of the University on other premises.

12. Reprisal or threat of reprisal against a complainant or against a person who has participated in proceedings under this policy, whether the complaint was substantiated or unsubstantiated, may constitute grounds for a complaint under this policy or under the Code of Conduct (Non-Academic).

** Complaints about behaviours, other than sexual harassment, which violate the University's governing principles fall under the jurisdiction of the Code of Conduct (Non-Academic) or of the Ombuds Office.*

General Principles

13. Complaints shall be made in writing and complainants shall be willing to be identified to the respondent in order for resolution to occur.

14. The complainant shall choose the procedure for resolution of the complaint; this choice is without any future prejudice.

15. Both complainants and respondents have the right to choose a member of the University, called an advisor, to accompany them throughout the proceedings.

16. Failure to comply with a resolution agreed upon as a result of the mediation or the administrative resolution procedures may result in disciplinary action by the University.

17. A complaint may be withdrawn at any time prior to the conclusion of the hearing procedure, thereby terminating the procedures.

General Procedures

18. The term "days" shall refer to working days.

19. All deadlines are binding, except where the possibility of extension is stipulated herein.

20. A detailed complaint shall be made in writing to the Sexual Harassment Officer as soon as possible, but no later than within nine (9) months of the alleged incident or of its discovery.

21. The complainant shall make a written request, within five (5) days of the filing of the complaint, to proceed with one of the following procedures for resolution:
   a) administrative resolution; or,
   b) mediation; or,
   c) hearing procedure.

22. If administrative resolution fails, the complainant may opt either for mediation or for the hearing procedure. If mediation fails, the complainant may only choose the hearing procedure. Once a complainant selects the hearing procedure as the option for resolution, there is no further recourse upon its conclusion, except for appeal.

Administrative Resolution

23. A complainant may request, in writing, administrative resolution by an Appropriate Authority as the first stage in the process of resolution.

24. Within five (5) days of receipt of the request for administrative resolution, the Sexual Harassment Officer shall forward a copy of the complaint and of the request to the respondent and to the Appropriate Authority.

25. The Appropriate Authority is:
    a) the Academic Dean, in the case of a complaint against a faculty member or a person employed in a faculty or in the Division of Graduate Studies; or,
    b) the Academic Dean or the Director of Continuing Education, in the case of a complaint against a student; or,
    c) the Chairman or Chairwoman of the Board of Governors, in the case of a complaint against the Rector; or,
    d) the Senior Administrator (Rector, Vice-Rector, Secretary-General, Associate Vice-Rector or Director, as the case may be) to whom the respondent reports most directly, in the case of a complaint against any other employee of the University.

26. The Appropriate Authority shall assist the parties in the settlement of the complaint as expeditiously as possible, but in any case not more than twenty (20) days after receiving the request for administrative resolution. This delay may be extended, in exceptional circumstances, by the Sexual Harassment Officer.

27. The Appropriate Authority may consult with the Sexual Harassment Officer in order to resolve the complaint.

28. Administrative resolution may result in a mutually acceptable resolution or in failure to resolve.

29. If a mutually acceptable resolution is agreed upon, the Appropriate Authority shall write a report detailing the steps taken to resolve the complaint and have it signed by the complainant and the respondent within five (5) days of completion of the process. The report of resolution shall immediately be sent to both parties and to the Sexual Harassment Officer.

30. If there is failure to resolve, the Appropriate Authority shall write a detailed report to this effect, within five (5) days of completion of the process, and shall immediately send the report to the Sexual Harassment Officer and to both parties.

31. If there is failure to resolve and no additional written request for resolution through the use of another procedure is received from the complainant within ten (10) days of the date of transmission of the report of failure to resolve, the complaint shall be deemed to have been withdrawn.

Mediation

32. A complainant may request, in writing, mediation in the following circumstances:
    a) as the first stage in the process of resolution; or,
    b) if administrative resolution fails.

33. In the case of 32b., a complainant shall make a request for mediation to the Sexual Harassment Officer, within ten (10) days of the date of transmission of the report from the Appropriate Authority that administrative resolution has failed.

34. Within five (5) days of receipt of the request for mediation, the Sexual Harassment Officer shall forward a copy of the complaint and of the request to the respondent, and shall seek an agreement from the respondent to participate in mediation. The respondent shall reply within ten (10) days of the date of transmission of this request.

35. If the respondent has not agreed to participate in mediation within fifteen (15) days of the date of transmission of the request to participate, the Sexual Harassment Officer shall write a factual report of failure to resolve, and send copies to both parties.

36. If both parties consent to mediation, the Officer shall provide them with a trained Mediator, within ten (10) days of agreement to mediate.

37. The mediation process shall be concluded as expeditiously as possible, but in any case not more than twenty (20) days after the appointment of a Mediator. This delay may be extended, in exceptional circumstances, by the Sexual Harassment Officer.

38. If a mutually acceptable resolution is agreed upon, the Mediator shall write a report and have it signed by the complainant and the respondent within five (5) days of completion of the process. The report of resolution shall immediately be sent to both parties and to the Sexual Harassment Officer.

39. If a resolution is not reached, the Mediator shall issue a report to this effect, within five (5) days of completion of the process, and shall immediately send copies to the complainant, the respondent and the Sexual Harassment Officer.

40. If there is failure to resolve and no additional written request for resolution through the use of the hearing procedure is received from the complainant within ten (10) days of the date of transmission of the report of failure to resolve, the complaint shall be deemed to have been withdrawn.

Hearing Procedure

41. A complainant may request, in writing, the hearing procedure before a Sexual Harassment Hearing Board in the following circumstances:
    a) as the first stage in the process of resolution; or,
    b) if administrative resolution fails; or,
    c) if mediation fails.

42. In the case of 41b. or 41c., the complainant shall make a request to the Sexual Harassment Officer, within ten (10) days of the date of transmission of the report of failure to resolve.

43. Within five (5) days of receiving a request for the hearing procedure, the Sexual Harassment Officer shall forward a copy of the complaint and of the request to the respondent and to the Code Administrator.

44. The Standing Panel, consisting of pools of students, staff and faculty, as established under the Code of Conduct (Non-Academic), shall receive appropriate training.

45. Members of the Standing Panel shall elect from among themselves a Chair to preside over the Sexual Harassment Hearing Boards. The Chair shall be a permanent, non-voting member of every Hearing Board established to hear complaints of sexual harassment and shall:
    a) maintain order during the hearings;
    b) answer procedural questions;
    c) schedule hearings;
    d) grant or deny delays; and,
    e) arrange to tape-record the hearings.

46. Within five (5) days of receipt of a request for the hearing procedure, the Code Administrator shall request a written response to the nature of the complaint from the respondent. The respondent shall forward his or her reply within ten (10) days of the date of transmission of this request.

47. Within fifteen (15) days of receipt of a request for the hearing procedure, the Code Administrator shall constitute a four-person Sexual Harassment Hearing Board from the Standing Panel. The Hearing Board shall be composed of:
    a) the Chair of the Sexual Harassment Hearing Boards;
    b) one member from a pool that has been selected by the complainant. If so desired, the gender of the member may also be selected by the complainant;
    c) one member from a pool that has been selected by the respondent. If so desired, the gender of the member may also be selected by the respondent; and,
    d) one member selected by the Code Administrator from any pool.

48. Prior to the hearing, the Code Administrator shall:
    a) inform both parties of the Hearing Board's composition;
    b) inform both parties and members of the Hearing Board of the date and time of the hearing, at least five (5) days in advance;
    c) provide both parties and members of the Hearing Board with a list of the advisors and a tentative list of witnesses; and,
    d) provide both parties and members of the Hearing Board with copies of the complaint and the response.

49. All hearings shall be closed and confidential unless one or both parties petitions the Hearing Board to have an open hearing, in which case the Hearing Board may decide, at its discretion, to admit members of the University.

50. At the beginning of the hearings, the Hearing Board may grant, at its discretion, intervenor status to the University or to any duly constituted University association or union, and may restrict their comments in order to avoid duplication of testimony.

51. All Sexual Harassment Hearing Boards shall adhere to the principles of natural justice including, minimally, the rights to:
    a) make oral or written statements;
    b) object to the choice of Hearing Board members for valid reasons;
    c) defend oneself;
    d) present witnesses;
    e) offer rebuttal; and,
    f) make representations on sanctions and remedies.

    Furthermore, advisors have the right to speak on behalf of the party they are accompanying.

52. The hearing shall be concluded as expeditiously as possible, but in any case not more than forty (40) days after the Hearing Board has been constituted. This delay may be extended, in exceptional circumstances, by the Chair of the Sexual Harassment Hearing Boards.

53. Within ten (10) days of concluding the hearings, the Hearing Board shall write a report and shall decide if there is clear and convincing evidence that sexual harassment as defined in article 7 has occurred, thus constituting a violation of this policy. The burden of proof is on the complainant.

54. Decisions of the Hearing Boards shall be made by a majority vote.

55. Reports of the Hearing Boards shall present a summary of the facts, shall include reasons for the decision or recommendations, and shall be signed and dated. They shall immediately be sent to both parties, the Sexual Harassment Officer and the Vice-Rector responsible for the application of this policy.

56. The Vice-Rector responsible for the application of this policy shall be designated by the Rector.

57. If a violation of this policy has occurred, the Hearing Board shall request that the Sexual Harassment Officer forward any records of resolution that have been filed on the respondent, in this case or in any other case, and shall use this information in recommending appropriate sanctions and remedies.

58. Within ten (10) days of the date of transmission of the decision of violation of this policy, the Hearing Board shall provide the opportunity to both parties to submit written or oral comments on appropriate sanctions and remedies.

59. The Hearing Board shall write a report to the Vice-Rector to recommend appropriate sanctions and remedies within fifteen (15) days of the date of the decision of violation of this policy.

60. Within five (5) days of receiving the recommendations, the Vice-Rector shall render a decision on the appropriate sanctions and remedies, and shall immediately inform both parties, the Sexual Harassment Officer and the Chair of the Sexual Harassment Hearing Boards.

61. The Vice-Rector shall release the above decision, without nominative information, to the University newspapers if the decision is not appealed.

Sanctions and Remedies

62. If a violation of this policy has occurred, the Hearing Board may recommend to the Vice-Rector that one or more of the following sanctions be taken against the respondent:
    a) written reprimand or warning, copy to be kept in the personnel or student file;
    b) imposed conditions, with or without a deposit not exceeding $200, returnable at a specific date. Such deposits may be forfeited should any conditions be violated;
    c) a fine not exceeding $100;
    d) payment not exceeding $1000 to compensate the complainant for injury or damage to or loss of property;
    e) exclusion from an area or function of the University for a stated period of time. If this exceeds twelve (12) months, the sanction shall be reviewed by the Hearing Board at the end of each twelve (12) month period. This sanction does not encompass the authority to suspend from any academic activity;
    f) probation;
    g) apology, as an alternative to any or all of the above;
    h) community service, as an alternative to any or all of the above;
    i) suspension, dismissal or expulsion, subject to confirmation by the Rector;
    j) a combination of any of the above; or,
    k) any other appropriate sanction the Hearing Board deems necessary to guarantee that the behaviour is not repeated.

63. Should the sanction be covered by a collective agreement or a University policy, the provisions of that collective agreement or policy shall apply, including grievance and arbitration procedures on sanctions.

64. If a violation of this policy has occurred, the Hearing Board may recommend to the Vice-Rector that one or more of the following remedies be taken in favour of the complainant:
    a) reinstatement in courses;
    b) reinstatement in a position, salary adjustment or promotion;
    c) reassessment of an essay or final grade;
    d) counselling;
    e) apology;
    f) receipt of payment for compensatory damages;
    g) receipt of payment from a fine;
    h) a combination of any of the above; or,
    i) any other remedy the Hearing Board deems appropriate.

Appeals

65. Appeals shall be heard in accordance with the procedures established under the Code of Conduct (Non-Academic).

66. The Vice-Rector shall release the decision of the Appeals Committee, without nominative information, to the University newspapers.

SUPPORT MECHANISMS

Sexual Harassment Office

67. A Sexual Harassment Office shall be established to allow for the centralization of education and complaint services relative to sexual harassment.

68. The mandate of the Office shall be to promote actively an environment free from sexual harassment at the University.

69. For this purpose, a Sexual Harassment Officer shall be designated and shall report to the Office of the Rector.

70. The Officer shall provide educational services and shall carry out the responsibilities enumerated in this policy. More specifically, the duties of the Officer are to:
    a) increase awareness on the issue of sexual harassment and provide extensive education to members of the University;
    b) publicize the Policy on Sexual Harassment to the University community, explaining the University's responsibility to act in such cases;
    c) chair and participate actively in the Advisory Committee on Sexual Harassment;
    d) assist and advise complainants and respondents involved in cases of sexual harassment;
    e) maintain confidentiality with respect to nominative information in complaints of sexual harassment;
    f) provide appropriate training to the members of the Standing Panel established under the Code of Conduct (Non-Academic);

g) provide information to Mediators on the University's employment practices, policies and collective agreements;
h) consult with senior administrators who may be involved in the resolution of sexual harassment complaints;
i) maintain statistics on requests for information, advice and assistance;
j) maintain confidential files on all complaints; in cases where a complaint is withdrawn before a report of resolution is made, the name of the respondent shall be deleted;
k) maintain a file on all records of resolution, with nominative information deleted; and,
l) prepare an Annual Report for the University to be submitted to the Office of the Rector and to the Advisory Committee on Sexual Harassment.

Advisory Committee on Sexual Harassment

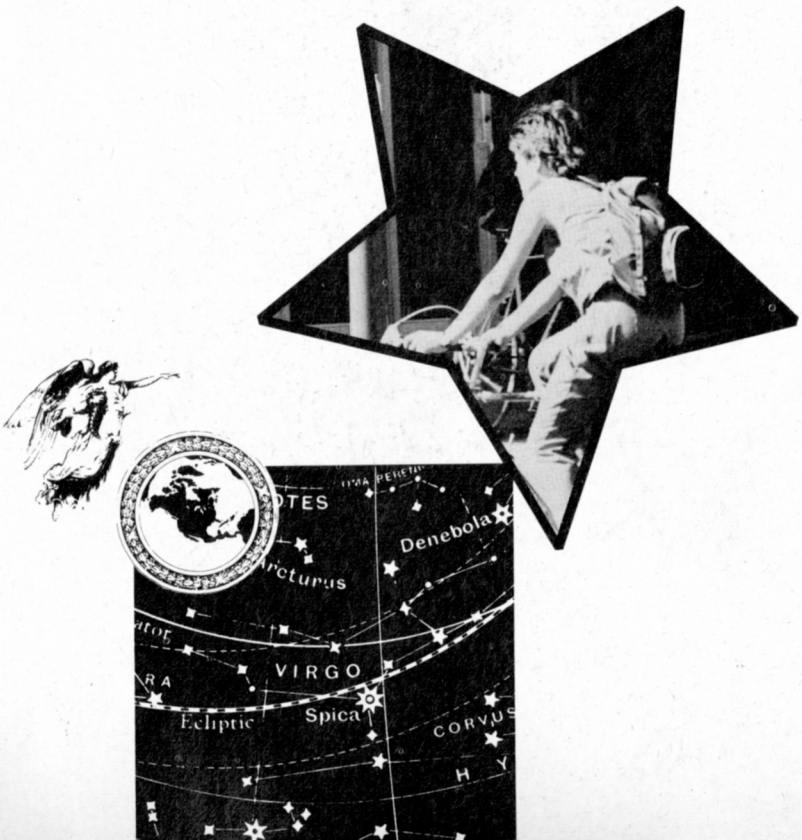
71. A permanent Advisory Committee on Sexual Harassment shall be established.

72. The mandate of the Committee shall be to:
    a) assist in the development of educational programmes;
    b) make recommendations on the continued development of the Policy on Sexual Harassment;
    c) receive and review the Annual Report of the Sexual Harassment Officer.

73. The Advisory Committee shall be formed of representatives from different constituent groups of the University.

74. Appointments shall be made for one year and shall be renewable.

SECTION 18



STUDENT SERVICES

18.1 DEPARTMENT OF FITNESS, RECREATION AND ATHLETICS

18.2 CONCORDIA GUIDANCE SERVICES
- 18.2.1 Counselling Services
- 18.2.2 Learning Skills and Writing Centre
- 18.2.3 Group/Workshop Programme
- 18.2.4 Guidance Information Centre
- 18.2.5 Canada Employment Centre

18.3 SCHOLARSHIP AND FINANCIAL AID INFORMATION
- 18.3.1 Concordia University Awards
- 18.3.2 Awards Offered by Associations, Companies, Foundations, Societies and Clubs
- 18.3.3 Concordia University Financial Aid
- 18.3.4 Gouvernement du Québec Student Loans and Bursaries
- 18.3.5 Federal and Provincial Loans and Bursaries
- 18.3.6 International Students
- 18.3.7 Government of Canada Awards and Scholarships

18.4 STUDENT LIFE AND STUDENT SERVICES
- 18.4.1 Student Life and Student Services
- 18.4.2 Social and Cultural Activities
- 18.4.3 Health Services
- 18.4.4 Legal Information Services
- 18.4.5 Residences and Housing
- 18.4.6 Campus Ministry
- 18.4.7 Services for Disabled Students

18.5 LACOLLE CENTRE FOR EDUCATIONAL INNOVATION

18.6 INTERNATIONAL STUDENTS
- 18.6.1 Immigration Procedures
- 18.6.2 Employment Authorization
- 18.6.3 Student Health and Accident Insurance
- 18.6.4 Tuition Fees for International Students
- 18.6.5 Cost of Living for International Students

18.1 Department of Fitness Recreation and Athletics

Director
ROBERT PHILIP

Associate Directors
PAUL ARSENAULT
KATHY MCDONALD

Coordinator, Recreation Area
VLADIMIR PAVLICIK

Coordinator, Athletic Area
LOUISA ZERBE

Coordinator, Education Area
MELANIE SANFORD

Coordinator, Facilities and Administration
JULIE HEALY

Coordinator, Marketing and Communications
JOHN DORE

The Department of Fitness, Recreation and Athletics offers a complete and diversified programme to meet the varied interests of today's students. The aim is to provide an opportunity for all students to participate in a physical activity of their choice.

Comprehensive fitness, recreation and skill development programmes operate on both campuses. They provide an extensive selection of fitness, team and sport activities for men and women under the supervision of professionally trained instructors. Skill development is a division of the Fitness, Recreation and Athletic Department's Education area. Its aim is to initiate, develop, and provide instructional courses that focus on participant development through learning and practice. Fitness and Recreation programmes provide a forum for physical fitness, structured participation, and low intensity competition. The principles of fair play and equality of opportunity guide all programme activities. Through the Fitness and Recreation programmes, the programme leadership will find ways to promote, facilitate, and support the involvement of a large number of participants in activities that improve levels of fitness and increase enjoyment through physical activity.

The interuniversity sport programme is primarily for students with playing experience. Graduate-level, as well as undergraduate, students pursuing studies on a full-time basis and meeting the requirements of the Canadian Interuniversity Athletic national championships and four league title, yet the focus of the interuniversity programme continues to be the development of academic and athletic pursuit.

The south campus is the focal point of all Fitness, Recreation and Sports on the Loyola Campus. This facility includes full-length playing fields and a fitness and recreation centre complete with an ice arena, gymnasium, weight training and exercise rooms. The Sir George Williams Intramural programme is centered in the Victoria School gymnasium.

Detailed information on fitness, recreation and athletic activities is available at the Sports Complex on the Loyola Campus, and at the Sir George Williams Campus Athletics office located at 1822 de Maisonneuve W. For further information, telephone 848-3850, Loyola Campus, or 848-3860, Sir George Williams Campus.

18.2 Concordia Guidance Services

Acting Director
DONALD L. BOISVERT

Associate Director
FREDERICK DENTON

Counselling Services
DIANE ADKINS
ROBERT BONCORE
JAMES DUBOIS
SUP MEI GRAUB
PRISCILLA KREDL
DOROTHY PLUMMER
MARY SCOTT

Head Librarian, Guidance Information Centre
MARLIS HUBBARD

Head, Learning Skills and Writing Centre
MARY MAR

Director, Canada Employment Centre
CATHERINE BROWN

Office Manager
JUNE DUNCAN

Loyola Campus:
WC-203
2490 West Broadway, Room
Tel: 848-3555

Sir George Williams Campus:
H-440
1455 de Maisonneuve Blvd. West
Tel: 848-3545

18.2.1 COUNSELLING SERVICES

Educational Counselling

Involves planning and decision-making pertaining to university education. Interest and aptitude tests are administered when appropriate.

Career Counselling

Offers students a process whereby they can make informed career choices based on individual assessments of their interests, skills and abilities. Students are encouraged to gather further information through research in the Guidance Information Centre.

Personal Counselling

Helps students who are experiencing personal difficulties. With a counsellor's assistance, students are able to clarify issues and find ways to cope more effectively with their problems.

18.2.2 LEARNING SKILLS AND WRITING CENTRE

Helps students find more effective ways of learning by developing reading, writing and study skills.

Offers students one-on-one help with writing problems in any subject.

18.2.3 GROUP/WORKSHOP PROGRAMME

Includes Job Search, Career Planning, Assertiveness Training, Reading Efficiency, Writing Workshops, Study Skills, Exam Anxiety Reduction, Stress Management, Time Management, and Personal Growth groups.

Students gain additional benefit from their interactions and the experiences of those who have the same concerns.

18.2.4 GUIDANCE INFORMATION CENTRE

Makes available information on education and career planning. The major areas of the collection are devoted to university calendars from around the world; directories of educational programmes; career choice, job hunting, résumé-writing; personal development books and employer literature.

18.2.5 CANADA EMPLOYMENT CENTRE

Offers an employment counselling and placement service to undergraduate and graduate students seeking part-time, summer and permanent employment. Service is available up to one year after graduation.

This office is located at: 2070 Mackay Street
Tel. 283-5177

18.3 Scholarship and Financial Aid Information

General Information
The Office of the Dean of Students maintains constant staff coverage in the area of financial aid and members of the staff are available to assist students in solving individual problems or in explaining existing regulations.

Graduate Awards Office
The Graduate Awards Office assists students who are seeking financial support for study or research leading to an advanced degree. A "Guide to Awards for Graduate Studies" is published by the office and is available to students seeking such assistance. Most awards are in the form of scholarships or fellowships which normally do not require repayment. These awards are usually designed to cover books, tuition, basic living expenses, and in some cases, travel to and from the University.
For further information, contact the Graduate Awards Office at 2145 Mackay Street (basement floor).

18.3.1 CONCORDIA UNIVERSITY AWARDS

Two types of awards are available to undergraduate students through the Financial Aid Office: Scholarships and Bursaries.
Entrance Scholarships are available to students entering university programmes, and In-course Scholarships are available to students who have completed at least one year of full-time study at Concordia University. In all cases, scholarships are awarded on the basis of scholastic achievement and, for some awards, consideration is given to the involvement in university life.
Bursaries are available to students who have completed at least one semester of full-time study at Concordia University. These bursaries are known as In-course Bursaries, and are awarded on the basis of scholastic achievement and financial need.
Unless otherwise stated, all awards are granted to full-time students who are Canadian Citizens or Permanent Residents.

CONCORDIA ENTRANCE SCHOLARSHIPS
Fall Entrance Scholarships: A number of scholarships are available to students entering their first year of full-time study. These are awarded by the University Scholarship and Awards Committee on the basis of academic achievement during the first three semesters of CEGEP or equivalent. Application forms are available from the Financial Aid Office and must be returned prior to March 1. Scholarships are valued at $2,000 and $1,000 per year. These scholarships are renewable for two subsequent years providing the renewal requirements are met.

January Entrance Scholarships: A number of scholarships are available to students entering Concordia in January. Application forms are available at the Financial Aid Office and must be returned prior to November 15. These scholarships are valued at $1,000 and $500 per semester. These awards are renewable for five subsequent semesters providing the renewal requirements are met.

Mature Students Entrance Scholarships: This programme is intended for students admitted to the University as "Mature Students". Applications are accepted from students who have successfully completed at least 18 credits, but no more than 30, at Concordia University. These scholarships are valued at $2,000 and $1,000 per year and are renewable for two subsequent years providing the renewal requirements are met.

Senior Students Scholarships: A number of scholarships are awarded to students 60 years of age or over. Application forms are available at the Financial Aid Office, and must be returned by September 1. These scholarships have a value of $500 each per academic year and are renewable for a maximum of four subsequent years providing the renewal requirements are met.

Senior Students Entrance Scholarship: Awarded annually to a newly admitted undergraduate student in any Faculty. The scholarship is renewable twice for a maximum tenure of 3 years provided the recipient maintains his/her full-time status and achieves a Grade Point Average (GPA) of no less than 3.0. This award is made possible by the generosity of Senior Students at Concordia University.

The Rona and Irving Levitt Family Foundation Entrance Scholarship: Intended to assist capable students to attend Concordia University, a number of scholarships are available to students entering their first year of full-time study. The scholarships are valued at $1,000 and are not renewable. These are awarded by the University Scholarships and Awards Committee on the basis of academic achievement during the first three semesters of CEGEP or equivalent, and a personal statement provided by the applicant. Application forms are available from the Financial Aid Office. The deadline is March 1.

The Loyola Alumni Association Education Grant: Established to assist deserving students who wish to attend Concordia University. These grants will be issued annually to students who have excelled in their studies leading to their university level programme. Although the grants are unrestricted, preference will be given to children of members of the Loyola Alumni Association. For further information, and application forms, contact the Financial Aid Office. The deadline is March 1.

Departmental Entrance Scholarships

The Institute for Co-operative Education Entrance Scholarship: A scholarship may be awarded to a student registered in the Institute for Co-operative Education. Students are selected by the Principal of the Institute for Co-operative Education in collaboration with the Programme Directors. Students may study in Building Engineering, Chemistry, Computer Science, Economics, Exercise Science, Mathematics, or Physics. For further information, please contact the Principal, Institute for Co-operative Education.

The Liberal Arts College Entrance Scholarship: Apply to the Principal, Liberal Arts College.

CONCORDIA IN-COURSE SCHOLARSHIPS

In-course Scholarships are awarded to full-time students (unless otherwise indicated) who have completed at least 24 credits at Concordia. Recipients are selected in the summer on the basis of the previous year's academic achievement. The scholarships are paid in the following fall and winter semesters. Recipients must maintain their full-time status throughout the year the award is tenable. Unless otherwise indicated, no application is required. Academic performance is reviewed with the Registrar's Office.

The Alain Award in Electroacoustics: Established in 1985, this award is granted annually to the student who demonstrates commitment and ability in the field of electroacoustics. Eligibility: Any student registered in the Electroacoustics programme within the Music Department of the Faculty of Fine Arts is eligible for consideration.

The American Association of Cost Engineers (AACE) Award: This scholarship was established in 1981 by the AACE. The award has a value of $500, complimentary membership in the AACE, plus a one-year subscription to the *Journal of Cost Engineering*. This award is non-renewable. This award is given annually to a full-time undergraduate student who has achieved the most outstanding performance in a set of three courses related to Cost Engineering: BLDG 401, BLDG 341, BLDG 491, and whose name appears on the list of potential graduates of the current year or, failing that, to a graduate student who has completed a thesis on a Cost Engineering topic. Students should submit an application to the Undergraduate Coordinator. Graduate students must be recommended by the Graduate Coordinator and the Thesis Supervisor. The recipient is notified in May and awarded the cheque at the annual AACE meeting. For further information, contact the Undergraduate Coordinator, Centre for Building Studies.

The Arthur Andersen and Company Scholarship: Established in 1976 by the Chartered Accountants firm of Arthur Andersen and Company. Eligibility: Open to all Commerce students entering their first year and majoring in Accountancy. Students must have a good academic record, and demonstrate leadership qualities in the classroom as well as in student activities.

The Association of Alumni of Sir George Williams University Scholarship: Established in 1988, through the generosity of the Association of Alumni of Sir George Williams University. Eligibility: Open to any full-time student.

The Stacie Lee Bessner Memorial Scholarship: Established in 1978 by the Bessner family in memory of their daughter Stacie Lee. Eligibility: Open to any full-time student in the Faculty of Commerce and Administration.

The Russell Breen Scholarship: Established in 1985 in honour of Dr. Russell Breen for his many years of dedication and service to Loyola College and Concordia University. Eligibility: Open to all full-time students in any faculty.

The Gunther Brink/Petro-Canada Scholarship: Established in 1989 by Petro-Canada in honour of Gunther Brink, a retired faculty member in the Faculty of Commerce and Administration.

The Canadian Tire Corporation Limited Scholarship: Awarded to a Commerce student majoring in Marketing.

The Canadian Women's Press Club (Montreal Branch) Scholarship: Established in 1976 by the Canadian Women's Press Club (Montreal Branch) to promote studies in the field of Journalism. Eligibility: Open to any student entering the second year of the Journalism programme.

The Al Cauley CJAD Electronic Journalism Grant: Established in 1982 by the CJAD Radio Station to honour long-time Montréal broadcaster Al Cauley. Eligibility: Awarded annually to a second- or third-year student enrolled in the Journalism programme who shows potential for a career in broadcast journalism. The award is made in April and is non-renewable. Applications should be made to the Director, Department of Journalism, and should include a description of the applicant's broadcast activities and interests, a copy of his/her transcript, and a short demonstration tape (audio/video).

The CJFM Radio Scholarship: Established in 1989 by CJFM Radio to promote studies in the fields of Communication Studies and Journalism. Eligibility: Open to second-year students in Journalism or Communication exhibiting an interest in radio broadcasting.

The Philip Cohen Music Award: Established in honour of Philip Cohen who was greatly responsible for the development of an "alternate" music programme at Sir George Williams University in the late 1960's. Eligibility: Open to any full-time student in the Music Department who demonstrates outstanding potential as an instrument player.

The Harry and Grace Colle Scholarship: Established in 1986, through a bequest to Concordia University by Mrs. Grace Colle. The awarding of this scholarship continues the lifelong interest of her and her husband in the education of young individuals. Eligibility: Open to all full-time students.

The Compton-Lamb Memorial Fund: This scholarship was established in 1974 in memory of the late Neil Compton and Sidney Lamb, faculty members in the English Department of Sir George Williams University. Eligibility: Awarded annually to a student in the Department of English. The recipient must be entering the last 30 credits of an English Honours programme. Applications should be made to the Chair, Department of English.

The Digital Equipment Scholarship: This scholarship was established in 1983 by Digital Equipment of Canada Limited. Eligibility: Open to all full-time students in the field of Computer Science.

The Carmine Di Michele Scholarship: Established in 1982 in honour of Carmine Di Michele, a faculty member of the Department of Modern Languages and Linguistics. Eligibility: Open to all students majoring in Italian. The award is granted upon the recommendation of the Department of Modern Languages and Linguistics.

The Pauline Donalda Scholarship: This scholarship was established in 1976 through "The Opera Guild of Montreal". Eligibility: Open to all full-time students in the Faculty of Fine Arts.

The Jean Fowler Scholarship: Awarded to a Commerce student on the basis of academic achievement.

Friends of Concordia Scholarship Fund: This fund was established through contributions from various foundations, corporations, alumnus, members of the University community and friends of Concordia. Eligibility: Awarded, at the discretion of the University Scholarships and Awards Committee, in recognition of academic achievement to undergraduate students without restriction to their field of study.

The Howard Gilmour Scholarship: This scholarship has been established by Mr. Gilmour's partners at Richter, Usher, and Vineberg, Chartered Accountants. Eligibility: Awarded annually to a Commerce student majoring in Accountancy, and entering the second year of the programme.

The Peter Glasheen Memorial Scholarship: This scholarship was established in 1986 by friends, associates and family of the late Peter Glasheen as a tribute to the spirit of his life—a major aspect of which was his abiding commitment to young people, their education and their future. Eligibility: Open to students in the International Business programme, Faculty of Commerce and Administration.

The Cynthia Gunn Journalism Award: Established in 1981 by family and friends to honour the memory of the late Cynthia Gunn, a reporter with The Montreal Star and The Gazette. Eligibility: Open to all prospective journalists enrolled in a third-year Journalism writing workshop. Applicants are judged on the basis of marks, published written work (if any), and written work produced for Journalism workshops. Applications must be made to the Director of the Department of Journalism and must include a current transcript, two samples of written class work and two samples of written published work.

The Henry F. Hall Scholarship: Established in 1982 by the faculty and staff of Sir George Williams University in recognition of the many years of service given to the University by the late Dr. Henry F. Hall. Eligibility: This scholarship is awarded annually on the basis of merit to a student in any faculty.

The Hellenic Student Association Scholarship: This scholarship was established in 1988 by the Hellenic Student Association of Concordia University. Eligibility: Open to all Canadian Citizens, Permanent Residents, or International students who can demonstrate Greek ethnic origin by providing an English copy of their birth certificates and/or their parents' birth certificates. Interested candidates must apply to the Director of Financial Aid in writing, and provide their University identification number and supporting documents no later than June 15 for consideration in the following academic year.

The Bill Hunt Memorial Scholarship: Established in 1977 in memory of the late Bill Hunt, a graduate of Sir George Williams University. This scholarship was established by friends and associates from the YMCA where Bill was a social worker. Bill's interest was in the rehabilitation of adolescents who had dropped out of school. Eligibility: This scholarship is open to all full-time students and is meant to help students who are attempting to re-establish their lives and their education.

The Lucille Irvine Memorial Scholarship: Established in 1967 by Mrs. William Broidy in memory of the late Lucille Irvine, a devoted teacher and former member of the staff of Sir George Williams University. Eligibility: Open to any full-time student in the Department of Psychology upon the recommendation of the Department.

The Ada Israel Memorial Scholarship: Established in 1986 by the family of the late Ada Israel, a student at Concordia University. Eligibility: Open to full-time students in the Philosophy Department who have completed at least twenty-four credits in Philosophy. Selection is made by the Chair, in consultation with the Department's Undergraduate Studies Committee.

The E. Leslie Jowett Scholarship: This scholarship was established in 1989 through the generosity of Mr. E. Leslie Jowett, a former Sir George William's College student who returned to the University following his retirement and graduated from the Faculty of Fine Arts in 1982. Eligibility: These scholarships will be awarded annually to full-time students without restriction to their fields of study.

The Silas Katz Memorial Scholarship: First awarded in 1984, this scholarship was made possible through donations from faculty, students and staff in memory of the late Dr. Silas Katz, Professor of Mechanical Engineering. Eligibility: This scholarship will be granted to an undergraduate student majoring in Mechanical Engineering who has a superior academic record, engineering initiative, and completion of between 30 and 90 credits. Selection is made by an Advisory Committee to the Chair. Recipients are notified in October. The award is renewable if the student maintains the criteria for the award. For further information contact the Chair, Department of Mechanical Engineering.

Kodak Scholarships: These scholarships are awarded annually to Cinema students on the basis of outstanding merit in Film Production. Applications must be made to the Chair of the Department.

The Robert Langstadt Memorial Scholarship: Established by Mrs. Anne Kahane Langstadt in memory of her husband. Anne Kahane and Robert Langstadt were both former Professors in the Faculty of Fine Arts. Eligibility: Awarded annually to a full-time undergraduate student majoring in Painting and Drawing and entering his/her second or third year of study in the programme.

The Irving Layton Award for Creative Writing: Established in 1988 by the Department of English, with the support of friends and colleagues, to honour one of Montréal's and Canada's finest poets. Irving Layton's association with Concordia includes many years as a generous and inspiring teacher, distinctive service as writer-in-residence on several occasions and as Adjunct Professor of English. Eligibility: This scholarship will be awarded to students who are completing the last 30 credits of their programme and who have demonstrated excellence in the writing of poetry, fiction, or drama. For further information and application forms, contact the Chair of the Department of English.

Le Château Stores Scholarship: Established in 1976 by Le Château Stores of Canada Limited. Eligibility: Open to all full-time students in the Faculty of Commerce and Administration entering their final year of study and specializing in Marketing.

The Susan Levin-Woods Scholarship: Established in 1988 by Susan Levin-Woods, a graduate of Concordia University. Eligibility: Awarded annually to a Canadian woman who has demonstrated excellence in her studies and who is pursuing a degree in Political Science on a part-time basis while following a career path or bringing up a family. The applicant must have completed 30 credits towards her degree. The recipient will be selected by the Chair of the Department. Application forms are available at the Financial Aid Office and must be submitted before August 1.

The Liberal Arts College Scholarships: The College administers several scholarships which are awarded annually and range in value from $250 to $1,000:

The Frances and David Rubin Scholarship
The Lois and Stan Tucker Scholarship
The Liberal Arts College Entrance Scholarships

These awards are made possible by donations from friends of the Liberal Arts College and are based upon high academic performance. Renewal is possible providing the student maintains the criteria for the award. For further information, contact the Principal, Liberal Arts College.

The Magil Construction Ltd. Scholarships: A number of in-course scholarships are available through the generous support of Magil Construction Ltd. Eligibility: Open to all full-time undergraduate students majoring in Civil Engineering, and to students who have completed 35 or 70 credits in the Building Studies programme. The recipients will be selected by the Chair of their respective programmes on the basis of academic excellence.

The Peter Matthews Memorial Scholarship: Established in 1987 by his family to honour the memory of Peter Kent Matthews, who died in 1986. Eligibility: This award is open to all full-time Computer Science students who have completed a minimum of 30 credits in the programme and are entering the second or final year of their undergraduate programme or entering the first or second year of a master's programme. Selection is made upon the recommendation of a Computer Science faculty member on the basis of academic standing.

The McGrath-Smith Memorial Scholarship: Established in 1981 in memory of the late Warrant Officer P.J. McGrath, RCAF, and Sergeant F.W. Smith, RAF, who gave their lives in combat in 1942. Eligibility: Open to all students majoring in Geography. Recipients are chosen upon the recommendation of the Chair of the Department.

The Norman McLaren Film Animation Scholarship: Established in 1981 by the late Norman McLaren, an animation filmmaker. Eligibility: Open to all students in the Department of Cinema.

The Helen McNicoll Art Prize: Established in 1975 in honour of the Canadian painter, Helen McNicoll, by Mrs. R. Fraser Elliott. Eligibility: This prize is awarded in alternate years to third-year students in Visual Arts and Art History who have shown exceptional talent. Selection is made upon the recommendation of the Faculty of Fine Arts.

The James McQueen Scholarship: Established in 1979 by the family of the late James McQueen as a tribute to his interest in education and higher learning. Eligibility: Open to all students in the Faculty of Engineering and Computer Science.

The Political Science Jean H. Picard Foundation: A series of scholarships are available to Political Science students. Interested students should contact the Chair of the Department of Political Science.

The P.T.R. Pugsley Memorial Scholarship: Established by friends of the late Professor Pugsley to commemorate his many years of service as Senior Professor in the Faculty of Commerce and Administration at Sir George Williams University. Eligibility: This scholarship is awarded annually to an outstanding student in the Faculty of Commerce and Administration.

The Raymond, Chabot, Martin, Paré Scholarship: Established by Raymond, Chabot, Martin, Paré, Chartered Accountants, to encourage and reward outstanding Accounting students. This award is comprised of a 13-week summer job, offering on-the-job training, plus a scholarship. Eligibility: Awarded to a full-time second-year Commerce student majoring in Accountancy, and conversant in English and French. A scholarship is also awarded provided the student has outstanding academic standing, top decile ranking in Accounting courses, and noteworthy participation in on- or off-campus activities. Application forms are available from the Financial Aid Office. The deadline is December 31.

The Ian Roberts Memorial Scholarship: This award was established in 1987 in memory of the late Ian Roberts, founder and President of Ian Roberts Inc. The award is twofold: it carries a cash award, and provides the recipient with summer employment for a period of 13 weeks between May and the end of August. Eligibility: Open to all Commerce students majoring in Marketing and entering their final academic year following the summer work period. The recipient must have completed the "Advertising and Sales Promotion Management" course (MARK 453). The recipient is nominated by the Chair of the Marketing Department to the University Scholarships and Awards Committee in April each year.

The David Rubin Award in Judaic Studies: A scholarship is awarded annually to an undergraduate student in the Judaic Studies programme. For further information, contact the Chair, Department of Religion.

The Anne Savage Memorial Scholarship: Established in the late 1970's in memory of painter and art educator, Anne Savage. Eligibility: Open to all students majoring in Art Education, upon the recommendation of the Fine Arts Faculty Council. Recipients are selected on the basis of artistic and academic achievement, and commitment to the vocation of teaching.

The William Schiff Award: Awarded annually to a senior full- or part-time student of 60 years of age or over who is pursuing a major in either the Faculty of Arts and Science or the Faculty of Fine Arts. This award is made possible by the generosity of Senior Students at Concordia University.

The Schwartz, Levitsky, Feldman Scholarship: Established by Schwartz, Levitsky, Feldman, Chartered Accountants, to reward outstanding scholastic achievement in Accountancy. Eligibility: Awarded to a Commerce student entering the final year of the Accounting programme who has the highest average grades in Auditing, Financial Accounting, and Taxation, and who is planning to continue studies for the Chartered Accountant designation.

The Segal High School Scholarship: Awarded to a full-time student in any faculty or course year on the basis of high academic achievement.

The Shell Scholarship Series: These scholarships are designed to support and encourage post-secondary education in specific fields of study. Eligibility: Applicants must be full-time undergraduate students in the Faculty of Commerce and Administration, and entering their second or third year of study. Recipients will be selected on the basis of scholastic achievement, interest in pursuing a career in the petroleum industry, and participation in extra-curricular activities. Application forms are available from the Financial Aid Office. The application deadline is July 31.

Casimir Stanczykowski Engineering Scholarship: Established in 1984 through CFMB Radio, Montréal, to honour the late Casimir Stanczykowski. Interested students should contact the Associate Dean, Student Affairs, Faculty of Engineering and Computer Science.

The Ruth Louise Vaughan Memorial Scholarship: Established in 1984 by the Vaughan family in memory of their sister and daughter. Eligibility: This scholarship will be awarded annually to a student in the Faculty of Fine Arts.

The Mair Verthuy Scholarship: Established by colleagues and associates to honour Mair Verthuy, a Professor at Concordia University. Eligibility: Intended for an undergraduate student majoring in Women's Studies. The recipient must have completed 60 credits with a minimum overall Grade Point Average (GPA) of 3.00; of the completed credits at least 30 must be in Women's Studies, with a minimum Grade Point Average (GPA) of 3.50.

The Weldon Scholarship: Established in 1969 through the estate of Richard Laurence Weldon. Eligibility: Awarded annually to a student in the Faculty of Engineering and Computer Science at the discretion of the University Scholarship Committee.

The Woolworth-Woolco Scholarship: Established by the F.W. Woolworth Co. Limited in 1985. Eligibility: Awarded to a student in the Faculty of Commerce and Administration in the final year of his/her programme, who has demonstrated superior qualities and abilities in academic standing and leadership presentation and who has a proven interest in retailing.

The Loyola Foundation Scholarships

Established through the generosity of The Loyola Foundation Inc., the following scholarships are awarded to students who take the majority of their courses on the Loyola Campus.

Avon Products of Canada Book Bursary: Donated through Avon Products of Canada.

The Lilley F. Barry Scholarships: In memory of Lilley F. Barry.

The Gordon Bennett Memorial Scholarships: In memory of the late Gordon Bennett.

The Charles J. Brown Scholarship: Donated by William J. Brown in memory of his late father.

The Ursula Carling Scholarship: In memory of Ursula Carling.

The Dr. Arthur Donohue Memorial Scholarship: In memory of the late Dr. Arthur Donohue, a graduate of Loyola College, Arts, 1918. Eligibility: This award is presented annually to a Science student.

The Francis J. Dowling Scholarship: In memory of the late Francis J. Dowling.

The Michael and Patricia Kindellan Memorial Scholarship: Established by the Kindellan family.

The Malone Scholarships: These scholarships were established in honour of Patrick G. Malone, s.j., the President of Loyola College from 1959 until 1975. Eligibility: Awarded to students on the Loyola Campus who have combined high academic achievement with leadership ability, commitment to and involvement in the student community.

The Kenneth J. McArdle Memorial Scholarship: Donated by Mrs. Mary McArdle and offered to a student in Science.

The R.C. Moore Memorial Scholarship: Open to a student who does not already possess a scholarship, is enrolled in either Honours Mathematics or Specialization in Mathematics (formerly Major in Mathematics), and entering third year. Awarded on the basis of marks obtained in Mathematics courses taken during the first and second year.

The Mrs. John Moriarty Scholarship: In memory of Mrs. John Moriarty.

The Winnifred O'Reilly Memorial Scholarship: In memory of Winnifred O'Reilly.

St. Ignatius Men's Association Scholarship: Donated by members of the Association.

The Clarence G. Smith Memorial Scholarship: Established by Mrs. Elizabeth M. Smith in memory of her son.

The James Weber Memorial Scholarship Fund: Established in memory of James Weber. Two scholarships will be awarded annually to students in any discipline on the basis of academic achievement.

Prizes

The Harry Clinch Book Prize: Established in 1982 by friends and colleagues to honour retiring Professor Harry Clinch, founder of the Geography Department. Eligibility: Open to all full-time students in the Geography Department.

The Hewlett-Packard (Canada) Ltd. Calculator Prize: Established by Hewlett-Packard (Canada) Ltd., these awards are intended to reward scholastic excellence. Eligibility: Awarded to students entering their second year of studies who have demonstrated excellence in the areas of Science and Computer Science.

CONCORDIA IN-COURSE BURSARIES

These awards are made on the basis of financial need and high academic standing. Applications are available at the Financial Aid Office and should be returned no later than January 31, unless otherwise stated.

The value of each award may fluctuate yearly depending upon current interest rates. Unless stated differently, awards are given to full-time students who are Canadian Citizens or Permanent Residents.

All Canadian Football Achievement Bursary: This bursary is granted to an athlete who has at least one year of playing experience with the Concordia University football team. The recipient must have completed a minimum of 24 full-time credits at Concordia with a cumulative Grade Point Average (GPA) of at least

3.30. This award is available to undergraduate or graduate students. Application forms are available at the Financial Aid Office and must be submitted no later than August 15.

The Joel Birenbaum Memorial Bursary: Established in 1972 in memory of Joel Birenbaum, a former student of Sir George Williams University. Eligibility: Open to all students in the Faculty of Arts and Science.

The Birks Family Foundation Bursaries: The Birks Family Foundation has established a plan of annual contributions to the Student Aid Fund of recognized Canadian universities for the creation of the Birks Family Foundation Bursaries. These bursaries are awarded by the Foundation on the recommendation of the Financial Aid Committee. They are not restricted to any faculty or course year and may be renewed. The number and amount of awards may vary annually depending upon the funds available for this purpose from the Foundation.

The Donald Buchanan Bursary: Established in 1977 by the family of Donald Buchanan. Eligibility: Open to all full-time students.

The Ethel Campbell P.E.O. Memorial Bursary: Established in 1967 by Colin C. Campbell in loving memory of his wife, Ethel May Routledge Campbell. Eligibility: Open to all full-time female students.

The Susan Carson Memorial Bursary: Established in 1989 by family, friends and colleagues of Susan Carson, a leading Montréal journalist. Eligibility: Granted on the basis of academic achievement and financial need, and open to any full-time student in the Journalism Diploma programme. The recipient must also demonstrate high ideals, concern for humankind, and qualities of citizenship. Preference will be given to students who have one or more dependent children. Interested candidates should contact the Director of the Journalism Department.

The Brenda Carter Memorial Award: Established in memory of Brenda Carter by her husband, Mr. David Wheeler, Professor of Mathematics at Concordia University, as well as by friends and colleagues. Brenda Carter was a dedicated educator and elementary school principal until ill-health forced her retirement. Without formal mathematical processes and procedures, and while not a doctrinaire feminist, she very much wanted many more women to find the keen pleasure in mathematics that she found. Eligibility: This award is given annually to a woman registered in a graduate or undergraduate programme in Mathematics. Preference will be given to a candidate who meets some or all of the following criteria:

- demonstrates a proven interest in teaching;
- has returned to academic study after an interruption;
- has overcome some particular handicap or obstacle (e.g., in academic background, physical health, financial security);
- is active in a social, political or professional organization.

Students wishing to apply for this award should contact the secretary to the Chair, Department of Mathematics, Loyola Campus (Room HB-236). The application deadline is December 15.

The Henry I. Chinks Memorial Bursary: This bursary was established in 1965 in memory of the late Henry I. Chinks, Vice-President, Avmor Ltd. Eligibility: Open to all part-time Chemistry students.

The CJFM Radio Bursaries: Two bursaries will be awarded annually to one female and one male student in the Communication Studies or Journalism programmes. Eligibility: Recipients will be selected on the basis of academic achievement and financial need. Applicants will be required to submit a short essay on the role of radio in the Montréal community. For further information, contact the Chair of Communication Studies or the Director of Journalism.

The J.P. Copland Memorial Bursary: Established in 1972 by the family of J.P. Copland. Eligibility: Open to all full-time students.

The Abe Gordon Dalse Club of Montreal Bursary: This bursary will be awarded to a deserving Canadian Citizen or Permanent Resident pursuing full-time studies. Eligibility: Open to any student following the Judaic Studies programme in the Department of Religion.

The Marjorie S. Dewitz Bursary: Established in 1988 by friends and colleagues of Marjorie Dewitz on the occasion of her 70th birthday. Eligibility: This bursary will be awarded to a full-time female student who is a Canadian Citizen or a Permanent Resident, and who has completed at least 24 credits in her programme of study. Furthermore, the recipient must be pursuing a Double Major, enrolled in Women's Studies and Political Science or combining a Major and a Minor in both disciplines. The recipient will be selected by the Undergraduate Bursary Selection Committee on the basis of nominations received from the Principal of the Simone de Beauvoir Institute, and the Chair of the Political Science Department.

The Engineers' Wives' Association Bursary: Established in 1976 by the Engineers' Wives' Association of Montreal. Eligibility: Open to all full-time students in the Faculty of Engineering and Computer Science.

Film Production Grants: A number of bursaries in Film Production are offered through the Department of Cinema, Faculty of Fine Arts. For further information and application forms, contact Professor Herman, Professor Locke, or Professor Waugh.

The Professor James Gilchrist Finnie Bursary: Established in 1976 by faculty and staff of Sir George Williams University, former students, colleagues, and business friends, in recognition of his many years of devoted service to the University. Eligibility: This bursary is awarded annually, on the basis of merit and/or need, to undergraduate students majoring in Accountancy, and entering their final year. Selection shall be at the discretion of the Financial Aid Committee, in consultation with the Chair of the Department of Accountancy.

The Magnus Flynn Bursary: Established in 1983 to honour Magnus Flynn for his years of devotion to Sir George Williams and Concordia universities. Eligibility: This bursary is granted to a Commerce student with high academic standing, who has made a strong contribution to student life. The award is based on the recommendation of the Chair of the Department.

The Peter Glasheen Memorial Bursary: Established in 1986 by friends, associates and family of the late Peter Glasheen as a tribute to the spirit of his life, a major aspect of which was his abiding commitment to young people, their education and their future.

The Maurice Gold Memorial Bursary: Established by family, friends and colleagues of Dr. Maurice Gold, a former faculty member of the Department of Accountancy. Eligibility: This bursary will be given to an Accountancy Major who is deserving, both academically and financially.

The Ernest Haznoff Memorial Bursary: Established in 1964 in memory of Ernest Haznoff (BSc 1959). Eligibility: Open to all full-time Philosophy Major or Honours students.

The Ralph B. Hood Memorial Bursary: Established in 1973 by the late Ralph B. Hood, with the intention of assisting needy and deserving young students. Eligibility: Open to all full-time students.

The John Jackman Bursary: Established by Mrs. Beth Swayne Jackman in memory of her husband, John Jackman, a former student in the Faculty of Fine Arts. Eligibility: Awarded annually to a student majoring in a Visual Arts discipline relating to Studio Art practice. The award will be given on the basis of scholastic achievement, demonstration of talent in the discipline of study, and financial need. Application forms are available at the Financial Aid Office. The application deadline is January 31.

Japanese-Canadian Bursary: Established in 1984 in memory of Japanese-Canadians who served in the Canadian Forces in World War I and II. Eligibility: Awarded to a needy and deserving student in any faculty.

The Joseph Gilbert Joyce Memorial Bursary: Established in 1967 in honour of the late Reverend Joseph Gilbert Joyce who, during his 24-year ministry at Verdun United Church, maintained a deep interest in the Evening Division of the University. This bursary was established in accordance with his conviction that knowledge and higher education be available to those who seek to make a creative contribution to the development of humanity. Eligibility: Awarded to a part-time student in any faculty or course year on the basis of academic standing, financial need and promise in the student's chosen field of study.

The Bruno and Stella Lebel Fine Arts Bursary: Established in 1981 in memory of the late Bruno and Stella Lebel. Eligibility: Awarded to a student in the Faculty of Fine Arts on the basis of financial need and high academic standing.

The Jack Lehman Bursary: Established in 1987 by the friends of Jack Lehman on the occasion of his 60th birthday. Eligibility: Open to all first-year students in the Ceramics section of the Department of Sculpture, Ceramics and Fibres.

The Loyola News Memorial Bursary: Awarded annually to a spring graduate who has combined community involvement and a Grade Point Average (GPA) of 3.00. The student may apply or be nominated by the Dean of Students.

The Marsh & McLennan Limited Centennial Bursary: Established in 1986 by Marsh & McLennan Limited. Eligibility: Awarded annually to an undergraduate student who has completed at least one year at Concordia. Selection is made on the basis of need and academic standing. Preference will be given to a Commerce student.

McDonald's Restaurants of Canada Limited Bursary: Established in 1988, this bursary is awarded annually to an undergraduate Commerce student who is deserving both academically and financially.

The S.H. McNeilly Bursary: Established in 1963 by Mrs. Mary McNeilly in honour of her late husband, S.H. McNeilly. Eligibility: Open to all part-time students who can prove employment with the Canadian Pacific Railway Company. Application must be made to the Director, Financial Aid by June 10.

The Nathan H. Messer Bursary: Established in 1971 by business associates and clients of Nathan H. Messer on the occasion of his retirement. Eligibility: Two bursaries are awarded annually to needy, worthy students entering their final year and majoring in Accountancy, Faculty of Commerce and Administration. Awards are made by the Financial Aid Committee following consultation with the Chair of the Department.

The John O'Brien Bursaries: Established in 1984 to honour Dr. John O'Brien, first Rector of Concordia University, for his contribution to Sir George Williams and Concordia universities. Eligibility: These

bursaries are restricted to students entering the Honours programme in Economics. Interested candidates may contact the Department Chair in May of each year.

The Donald L. Peets Bursary: Established in 1990 in recognition of the contributions made by Donald L. Peets to student life and services during his many years of association with Sir George Williams and Concordia universities as a teacher and administrator. Eligibility: Open to all full-time students in the Biology Department.

The Harry Pinker Endowment Fund: Established in 1988 in honour of Mr. Harry Pinker, a Montréal lawyer. Eligibility: Awarded annually to a needy and deserving student in the Faculty of Arts and Science.

Myer F. Pollock Bursary: Established in 1971 by Mrs. Bess Pollock on the occasion of the 60th birthday of her husband, Myer. Eligibility: Open to all students in the Faculty of Engineering and Computer Science.

The Mrs. Tony Robinson Career Enhancement Bursary: Established through the National Council of Jewish Women of Canada in 1976 to honour Mrs. Tony Robinson for her work in community services. Eligibility: Open to any student 45 years of age or over who is engaged in full-time or part-time studies towards an undergraduate degree. Applicants may be Permanent Residents or Canadian Citizens who are engaged in a university programme in order to change or upgrade their career qualifications, or persons who have had an interruption in their university education and now wish to continue. Applicants will be considered on the basis of merit and financial need.

The Theodore Ronis Memorial Bursary: Established through the National Council of Jewish Women of Canada in memory of the late Theodore Ronis. This bursary was established by his friends to perpetuate the memory of his friendship. Eligibility: Awarded annually to a deserving student studying (preferably, but not necessarily) towards a Bachelor of Commerce degree.

The Royal Albert Lodge Bursary: This bursary is awarded to a) children of members of the Royal Albert Lodge or b) children of members of other Masonic Lodges. If neither a) nor b) qualify, any worthy student may apply and receive this bursary at the discretion of the Financial Aid Committee.

The St. Andrew's Society Bursary: Established in 1971 by the St. Andrew's Society of Montreal. Eligibility: This bursary is open to all full-time students. Applicants will be required to demonstrate proof of Scottish birth or ancestry.

The Jeffrey David Skowronski Dramatic Arts Bursary: Established in 1988 by the Skowronski family in memory of their son, Jeffrey David. Eligibility: Awarded annually to a full-time undergraduate student who is majoring in Theatre.

The Walter Stenhouse Bursary: Established in 1964 by Mrs. E. Pavey and Mrs. J. Tombs, under the auspices of The Arts Club of Montreal, to honour Walter Stenhouse. Eligibility: Awarded to a student entering his/her final year in the Faculty of Fine Arts.

The 3M Canada Inc. Bursary: This award is based on satisfactory standing and demonstrated financial need, and is open to all full-time students.

The George V. Uihlein, Jr. Memorial Bursary: Established in 1977 by the Office of the Dean of Students of Loyola College, in memory of the late George V. Uihlein, Jr., for his outstanding contributions to student life. Eligibility: Awarded annually to a full-time student entering his/her final year with an outstanding record in non-athletic extra-curricular activities.

University Women's Club of Montreal Bursary: The University Women's Club of Montreal Public Foundation offers an educational grant to assist a mature woman who has been accepted into a full-time undergraduate programme at Concordia. Eligibility: This bursary will be awarded to a) a woman whose university studies have been interrupted, and who wishes to re-enrol in a full-time programme or b) a woman who has not previously been registered in a full-time programme, but has made the effort to qualify for admission. Application forms are available at the Financial Aid Office and must be submitted by March 1.

The Jean Paul Vallee/Royal LePage Bursary: Established in 1987 by family, friends and associates to honour the late Jean Paul Vallee. Eligibility: This bursary will be awarded annually to a deserving and needy full-time undergraduate Commerce student.

The Professor Joseph P. Zweig Bursary: Established in 1981 in recognition of the contribution of Professor Zweig to Sir George Williams and Concordia universities in teaching and student services during his 43-year association with both universities. Eligibility: This bursary is awarded, on the basis of high scholastic achievement and a substantial contribution, to a student studying in the areas of Psychology of Fitness, Exercise Science and/or Behavioural Medicine. The candidates will be nominated by Faculty members in the Psychology Department involved in these areas.

Concordia Senior Student Bursary Programme

Concordia University has, for many years, endeavoured to facilitate access to university studies for senior citizens. The University is happy to offer, to eligible students who make the request, bursaries to help defray the cost of their studies. These bursaries are non-renewable, but recipients may apply in successive years.

Eligibility: Applicants must be 65 years of age or over, and registered as full- or part-time students at Concordia University. Applicants must be considered as either Senior Independent, Senior Undergraduate or Graduate students.

Value of Bursaries: The value of these bursaries will be calculated on a per credit basis corresponding to the following levels for each student category:

a) Senior Independent students: up to $19 per registered credit.
b) Senior Undergraduate students: up to $14 per registered credit.
c) Senior Graduate students: up to $13 per registered credit.

Approval Process: Recipients will be selected on the basis of progress in their studies, and a personal statement indicating mention of their financial need and how this bursary would be of assistance to them.

Application Deadline: Application forms are available at the Financial Aid Office, and must be returned to this office by the following deadlines:

October 1: for students beginning or continuing their studies in the Fall semester.
February 1: for students beginning their studies in the Winter semester, or for those who become eligible during the Fall semester.

18.3.2 AWARDS OFFERED BY ASSOCIATIONS, COMPANIES, FOUNDATIONS, SOCIETIES AND CLUBS

The awards listed in the following section are sponsored and administered by external associations, companies, foundations, societies and clubs. Applications go directly to the organization administering the award, unless otherwise noted.

Bell Canada: Seven renewable bursaries are available for Québec and Ontario. The candidate must be a child of a permanent employee, a retired employee, or a deceased employee (if employed with Bell Canada at the time of death). The recipient must have maintained a Grade Point Average (GPA) of 3.70 for the previous two years of university studies in a degree-granting programme. For further information and applications, write to the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1.

The Henry F. Bennett Education Fund: The purpose of this fund is to make loans to deserving students in need of financial assistance to enable them to study Engineering at the university level and who have proved themselves by successfully completing their first year in Engineering or the equivalent. Apply to the Engineering Institute of Canada, 2050 Mansfield Street, Montréal, H3A 1Y9.

The Birks Family Foundation Scholarship Plan: Tuition scholarships are available to students who are children of employees of Birks. For further information, contact the Birks Family Foundation.

The Cal Callahan Memorial Bursary: Each year the Pipeline Contractors Association of Canada offers bursaries, totalling $2,000, to children or legal wards of persons who derive their principal income from the Pipeline Industry, and whose employers are members of this Association. Applications may be obtained from the Pipeline Contractors Association of Canada, Suite 720, 5915 Airport Road, Mississauga, Ontario, L4V 1T1. The deadline for application is September 30. Applications must be accompanied by proof of registration in a Canadian university.

Canadian Italian Business & Professional Men's Association: Bursaries are awarded by the Association to students of Italian origin or descent. Apply to the President, Trust Fund Committee, Suite 350, 6020 Jean-Talon Street East, Montréal, H1S 3B1.

Canadian Water Resources Association Bursary: Applicants must be Canadian Citizens or Permanent Residents and should have been registered as full-time students in a Canadian university since the fall of 1984. Applicants must be recommended by their Department Chair. For information, write to the Chairman, C.W.R.A. Scholarship Committee, Grand River Conservation Authority, 400 Clyde Road, Cambridge, Ontario, N1R 5W6. The deadline is October 31.

Celanese Canada Ltd.: Several entrance scholarships in any course leading to a baccalaureate degree are offered to the children of employees or annuitants of Chemcell or its subsidiary companies. Further information and application forms should be requested directly from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. Completed forms, in triplicate, are to be sent directly to the same address to arrive no later than June 1.

Consumer Glass Company Limited University Education Awards Plan: Open to children or wards of employees and retired employees of Consumer Glass Company Limited for a full-time course of study in any Canadian university or college recognized by the Association of Universities and Colleges of Canada.

These scholarships are renewable for a maximum of four academic years or until a first degree is obtained, whichever occurs first. Awards are automatically renewed providing the student establishes continued eligibility and successfully completes the previous academic year. Further information and application forms may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1.

Continental Insurance Companies (Canadian Scholarships Plan): University entrance scholarships in courses leading to a baccalaureate degree may be applied for by the natural children or adopted children, stepchildren, or legal wards of employees of one of the Continental Companies operating in Canada. Further information and application forms may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. Completed applications should arrive no later than June 1.

Culinar Inc.: Bursaries are awarded to dependent children of active employees of Culinar Inc. (with a minimum of two years with the company). The applicants must be at least 21 years of age and have completed the last two years of CEGEP studies within 24 months, with a Grade Point Average (GPA) of 3.30 for each year. For information and application forms, contact the Human Resources Department, Culinar Inc., Suite 1610, 2 Complexe Desjardins, Montréal, H5B 1B2. Applicants must submit CEGEP transcripts, reference letters, and any other relevant documents prior to June 2.

The Elizabeth Greenshields Foundation: Grants are available to assist talented young artists (painting, drawing, printmaking, sculpture) in the early stages of their careers. Applicants must be under 31 years of age, and their work must be representational—the Foundation's Charter precludes abstract art. (Candidates may hold citizenship in any country.) Contact The Elizabeth Greenshields Foundation, 1814 Sherbrooke Street West, Montréal, H3H 1E4.

Gulf Oil Canada Limited: Several university entrance scholarships are awarded annually to the children (natural or adopted) of employees and annuitants of Gulf Oil of Canada and its subsidiary companies in Canada. Further information and application forms should be requested from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. Completed applications should arrive no later than June 1.

The C.J. Hewitt Bursaries: A number of bursaries are available from the estate of the late C.J. Hewitt. Preference will be given to members of the families of employees of Hewitt Equipment Limited in Montréal. For further information, contact the Personnel Office, C.J. Hewitt Equipment Limited.

Hungarian-Canadian Engineers Association Student Trust Fund: Scholarships and bursaries are awarded by the Association to students of Hungarian origin or descent. Applications are evaluated on the basis of scholastic achievement, character, career plans and financial need. Information and application forms can be obtained by writing to the Hungarian-Canadian Engineers Association, 5521 Randall Avenue, Côte St-Luc, Québec, H4V 2V7.

Iron Ore Company of Canada (Scholarship Plan): A limited number of entrance scholarships for study towards a first degree are offered to children or wards of employees, annuitants, or deceased annuitants of the parent or subsidiary companies. Further information and application forms should be requested from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. Completed forms, in triplicate, are to arrive no later than June 1.

La Fondation Girardin-Vaillancourt: This award is offered to a Canadian Citizen and resident of the Province of Québec. Applicants must be registered in, or intend to register in, a full-time university programme in one of the following disciplines: Co-operatives, Economics, Finance, Administration, Science, or Arts. Information and application forms may be obtained at the Financial Aid Office, and must be submitted to La Fondation Girardin-Vaillancourt, 1 Complexe Desjardins, Montréal, H5B 1E7. The deadline is March 1.

Lebanese-Syrian-Canadian Association Scholarships: A number of scholarships are awarded annually to students of Lebanese-Syrian descent. For information and applications forms, contact the Chairman, Scholarship Committee, Lebanese-Syrian-Canadian Association, 40 Jean-Talon Street East, Montréal, H2R 2W5.

Leonard Foundation Scholarships: Preference in the selection of students shall be given to the children of clergymen; schoolteachers; Officers, Non-commissioned Officers and Men (active or retired) who have served in Her Majesty's Military, Naval, or Air Forces; graduates of the Royal Military College of Canada; members of the Engineering Institute of Canada; members of the Mining and Metallurgical Institute of Canada. Apply to the Senior Trust Officer, Canada Trust Company, 253 Bay Street, Toronto, Ontario, prior to March 31.

Montreal Lakeshore University Women's Club: Two bursaries are available from the Lakeshore University Women's Club, valued at $800 each. (1) The Undergraduate Bursary is available to a female resident of the West Island of Montréal who is enrolled in university for the purpose of studying towards an undergraduate degree. (2) The Continuing Education Bursary is available to a female university graduate who is returning to university to further qualify in a particular field. Financial need and academic standing are factors considered in determining the recipients.

Québec Cartier Mining Company: A limited number of four-year or first-degree entrance scholarships are offered to candidates whose parents or legal guardians have been employees of the Québec Cartier Mining Company for at least four years. Further information and application forms may be obtained from the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1.

St- Laurent Cement Inc.: Applicants must be dependent children of a current or retired employee, or of an employee who died while employed by the company. Candidates must have maintained a Grade Point Average (GPA) of 3.00 in the last three years of study leading to a university degree. For information and application forms, write to the Bursary Programme, Personnel Services, St. Laurent Cement Inc., Suite 1024, 50 Place Crémazie West, Montréal, H2P 2T7. The deadline for applications is June 25.

Robert and Mary Stanfield Foundation Undergraduate Bilingual Exchange Scholarships in Canadian Studies: In order to improve understanding between French-speaking and English-speaking Canadians, this scholarship is intended to assist the winners in their ongoing studies relating to Canada, its cultures, people, and institutions, and to encourage their personal development. Field of studies include: Canadian Northern Studies, Canadian Plains Area Studies, French Canadian Studies, Native Studies, Canadian Politics and History, Canadian Urban Studies and Canadian Literature. Candidates must be enrolled in their second or third year of university studies. Preference will be given to students planning to attend a university in another province. The language of study shall be French in the case of English-speaking winners and English in the case of French-speaking winners.
For further information and application forms, contact the International Relations and Scholarship Administration, Canada Awards Office, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. Deadline is February 1.

Texaco Canada Merit Scholarship Programme: Several entrance scholarships tenable for up to a maximum of the first four years of undergraduate study may be applied for by the dependent children (natural or legally adopted) of employees or annuitants or deceased annuitants of Texaco Canada. Application forms may be obtained by employees of Texaco Canada from their supervisor. Completed applications, in triplicate, must be sent to the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1 no later than June 1.

Disabled Students

The Québec Federation of the Blind Inc. Bursary: Bursary assistance is awarded to registered blind students or their parents. Application must be made to the Activities Co-ordinator, Québec Federation of the Blind Inc., Room 115, 7000 Sherbrooke Street West, Montréal, H4B 1R3.

The Edward G. McLean Memorial Scholarship: The Lions Club of Montreal (Central) has established a scholarship fund to honour one of its most dedicated and beloved members, the late Edward G. McLean, Past Lion District Governor. Eligibility: This scholarship is awarded annually to a deserving disabled student. Academic excellence is not the sole criterion of selection. Other attributes will be considered such as motivation, unusual talents, degree of impairment, and financial need. Application forms are available at the Financial Aid Office. The application deadline is March 31.

The National Bank of Canada Bursaries and Summer Employment Programme for Disabled Students: This programme is designed to encourage young Québec students with physical or sensory disabilities to pursue college and university level studies, as well as to enable them to acquire work experience related to their studies. Eligibility: Applicants must have a physical or sensory disability, as certified by a medical practitioner. Employees of the Bank, and persons living with them, are not eligible. Application forms are available at the Financial Aid Office and must be submitted directly to the National Bank by December 1.

Imasco Bursaries for Disabled Students (AUCC Affiliated): Applicants must be Canadian Citizens and considered to be disabled according to the 1975 United Nations declaration. Students must be registered in an institution recognized by the Association of Universities and Colleges of Canada (AUCC). Employees of Imasco or its affiliates are not eligible. For information, write to the Director of Awards, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario, K1P 5N1. The deadline is June 1.

The Rixon Rafter Bursary for the Blind: Established by the late Rixon Rafter, a number of bursaries are available to legally blind Canadians who are pursuing post-secondary studies and wish to pursue a professional career. Applications forms are available from, and must be returned to, the Rixon Rafter Scholarship Committee, The W. Ross MacDonald School, Brantford, Ontario, N3T 3J9. The deadline for application is September 30.

Awards

The Queen Elizabeth Silver Jubilee Award (AUCC Affiliated): This award is offered to young Canadians wishing to pursue studies in their second official language. Candidates must be Canadian Citizens or Permanent Residents, and must have successfully completed at least one year of a university programme prior to the year of the award. In addition, they must demonstrate sufficient ability to carry out disciplinary studies in their second language. Candidates must apply to the Financial Aid office no later than February 1. Only one candidate per institution will be nominated.

The Terry Fox Humanitarian Award: Applicants must be Canadian Citizens or have applied for citizenship, and must be duly registered in a Canadian university or college. Selection criteria for recipients are based on demonstration of the highest ideals and qualities of citizenship and humanitarian service while in pursuit of excellence in their academic, amateur sport, fitness, health, community service, or related endeavours. Information and application forms are available from the Financial Aid Office or by writing to the Terry Fox Humanitarian Award Programme, Suite 771, 151 Sparks Street, Ottawa, Ontario, K1P 5E3. The deadline for submission of applications along with supporting documentation is February 1.

Imperial Oil Higher Education Awards: Imperial Oil offers annual tuition and other compulsory fees to all children or wards of its employees or annuitants who proceed to higher education courses. These courses may be taken at any Canadian university or other approved institution of higher learning. Each award is tenable until the completion of a first degree or for a maximum of four years. Further information and application forms may be obtained from the Secretary, Committee of Higher Education, Imperial Oil Limited, 111 St. Clair Avenue West, Toronto, Ontario. Eligibility: A student must maintain an average of 70% or more in the year upon which the application is based.

18.3.3 CONCORDIA UNIVERSITY FINANCIAL AID

Work Study Programme

Work Study is a Financial Aid programme funded by Concordia University. The programme is designed to assist full-time students with education and living costs, when their own resources are determined to be insufficient, by working part-time at Concordia University during the school year.

The intent of the programme is to give students an opportunity for career or life-related experience while, at the same time, meeting a portion of their financial need.

Students may earn up to approximately $1,250 by working on a Work Study Project. Note that students may not work more than 15 hours per calendar week.

Eligibility: A student is eligible for Work Study if he/she meets the following criteria:

a) must be a Canadian Citizen, a Permanent Resident, or an International student;
b) must be registered as a full-time student for the academic period in which the work is performed;
c) must demonstrate financial need as evidenced by a needs test done by the Financial Aid Office.

Application Procedure: Application forms are available at the Financial Aid Office, and must be returned to this office. The Financial Aid Office will review the eligibility of student applicants and issue a Work Study Authorization form to eligible candidates. Students with Work Study Authorization will be invited to apply directly to the hiring Department.

Further information can be obtained at the Financial Aid Office, and by reading the "Work Study Information and Application" pamphlet available at the Financial Aid Office.

Tuition Deferrals

Students who have received a confirmation of financial assistance from a government funding source and who are unable to pay their tuition fees by the required deadlines may apply to defer payment until such time as they receive their funds. Application for tuition deferrals must be made through the Financial Aid Office.

Emergency Loans

Funds are available at the Financial Aid Office for short-term emergency loans. Such loans are issued to undergraduate and graduate, full-time and part-time students at Concordia University. Students must see a Financial Aid Officer for further information on eligibility requirements and conditions.

The service is made possible by contributions from the Concordia Council on Student Life, the Concordia University Students' Association, the Engineering and Computer Science Students' Association, the Graduate Students' Association, and the St. Andrew's Society of Montreal.

18.3.4 GOUVERNEMENT DU QUÉBEC STUDENT LOANS AND BURSARIES

Detailed information can be found in a government-published booklet "Rules for Awards of Student Loans and Bursaries". This booklet is available at the Financial Aid Office.

The individual student has full responsibility for communicating with the government, and making all the necessary arrangements to process his/her application form. All announcements concerning deadlines, conditions and awards will be posted, upon receipt, on information boards located in the Financial Aid Office.

All eligible students are expected to apply for, and accept, the maximum loan and bursary. Students should note that financial assistance is limited, and they are strongly advised to weigh their financial position at the start of each academic year. An inability to meet the expenses involved can reflect directly upon academic performance and place the student's career in jeopardy. The basic principle of awarding financial aid is that the primary obligation in paying for an education rests with the students and their parents. This means that a student is expected to have savings from summer employment and that parents must contribute according to their ability. The Financial Aid Office exists solely to assist students and to help them find financial aid should it be required.

Eligibility

Students are eligible for government assistance if they meet the following conditions: 1) Canadian Citizen or Permanent Resident; 2) domiciled and residing in Québec for one year (excluding residents of other provinces who move to Québec to pursue their full-time studies); 3) must be enrolled full-time with their

principal occupation being the pursuit of a course of study recognized by the Ministry of Education and lasting at least 13 weeks per session. Full-time credit load for undergraduate students is defined as a 12-credit minimum per term.

In addition, the student must not have received assistance for a period exceeding:

a) 10 semesters of university studies towards a Bachelor's degree;
b) 14 semesters of university studies towards two Bachelor's or professional degrees;
c) 9 semesters of university studies towards a Master's degree;
d) 12 semesters of university studies towards a Doctorate degree.

The periods described above are not cumulative but are independent of each other. A student may not receive assistance for more than 22 semesters of full-time study.

Deadlines

In order to expedite the processing of applications for financial aid, thereby accelerating the delivery of loan certificates and bursary cheques to educational institutions, the Direction générale de l'aide financière aux étudiants has set deadlines for submission of application forms as follows:

May 31: for all students who SUBMITTED a loan and bursary application form for the previous school year

June 30 : for all students who DID NOT SUBMIT a loan and bursary application for the previous school year

OR: within 45 days of the date of the student's letter of acceptance from the educational institution he/she will attend, PROVIDING this letter was sent out after May 15. A copy of the letter of acceptance must be included with the application form.
The postmark shall serve as proof of the date on which the student's application for financial aid was mailed.

PHYSICALLY DISABLED STUDENTS

Students in any faculty, who are Canadian Citizens and have been resident and domiciled in Québec for one year, may apply for a bursary if they have suffered from Poliomyelitis, Tuberculosis, certain forms of cardiac trouble, or any other severe physical disability. Applications are made to the Financial Aid Office. Further information is available at Services for Disabled Students.

SECOND LANGUAGE STUDIES BURSARIES

This programme is intended for college and university (undergraduate) students, both French-speaking and English-speaking, who wish to learn their second language by immersion in an environment where that language is dominant. This programme is funded by the Department of the Secretary of State in accordance with the federal/provincial agreements on the official languages in education and is administered by the Direction générale de l'aide financière aux étudiants of the Ministère de l'enseignement supérieur et de la science.

Eligibility Criteria:

1. Applicants must be Canadian Citizens or Permanent Residents, and meet one of the following conditions concerning "residence" in the province of Québec:

a) Be unmarried and considered to be dependents of their parents if the latter resided in Québec at the time the applicants applied for a bursary. However, unmarried applicants whose parents take up residence in another Canadian province do not lose their Québec resident status, provided that they continue to reside in Québec for the purpose of undertaking or continuing their studies.

b) Be married students or independent unmarried students or unmarried students whose place of residence cannot be established on the basis of that of their parents (for example, if their parents are deceased, missing, or reside outside Canada), provided that:

i) the students already have resident status when they become independent
OR

ii) the province of Québec was the students' last place of residence for a period of 12 consecutive months, excluding time devoted to full-time studies at an educational institution. However, married students who cannot establish Québec resident status are considered to hold such status provided that:

they and their spouse have their principal residence in Québec and are enrolled in full-time studies at an educational institution, AND
that their spouse have Québec resident status, and an agreement exists between Québec and the province where they and their spouse have resident status.

2. Applicants must have applied for admission as full-time students to Canadian educational institutions located in areas favourable to the development of their second language.
3. In the upcoming school year, applicants must be enrolled as full-time students for two consecutive terms in programmes of studies at the college or university level (undergraduate) in which at least 75% of the courses are taught in their second language.
4. The applicants' mother tongue must be either French or English, and is determined by the language spoken at home. In the case of individuals who speak neither French nor English at home, two years of previous studies in one of the official languages shall establish the applicants' mother tongue.
5. Applicants must not be participants in the second-language monitor programme for the year in question.
6. Applicants must not have completed two or more years of full-time studies in their second language since the start of their schooling.

Graduate students enrolled in a Québec university, and participating in an official student exchange programme with another Canadian university, may receive this bursary provided they fulfil the other eligibility requirements.
Application forms are available at the Financial Aid Office.
Deadline for submitting applications: June 30.

SUMMER LANGUAGE IMMERSION COURSE BURSARIES

Bursaries will be granted to students across Canada to enable them to enrol in a six-week immersion course in French or English at accredited institutions.
The aim of this programme is to provide post-secondary students with the opportunity to learn one of Canada's official languages as their second official language and to improve their knowledge of the culture represented by that language. Candidates whose mother tongue is neither French nor English may not receive bursaries to study English or French as their first official language. These bursaries will defray the cost of tuition, instructional materials, and room and board, but will not cover transportation costs or pocket money.
Inquiries regarding the awarding of bursaries (e.g., eligibility, etc.) should be made to the students' provincial coordinator or territorial official, the names and addresses of which are available at the Financial Aid Office.

Eligibility:
Students are eligible if they meet the following conditions:
a) are Canadian Citizens or Permanent Residents at the time of application. Students studying in Canada on visas are not eligible;
b) have general post-secondary standing or can prove that they will have obtained such a status by the time they become involved in the programme;
c) were enrolled as full-time students during the academic year.

OFFICIAL LANGUAGE MONITOR PROGRAMME

Monitors are students who help students with the spoken language by conveying to them the real-life aspect of the language. They carry out their duties under the supervision of second-language teachers for six to eight hours per week through supplementary non-teaching activities. Monitors can receive up to $3,000 for eight months' participation in the programme (September to April). They are also reimbursed should they need to travel to and from another province in order to participate in the programme. For further information contact the Financial Aid Office.

18.3.5 FEDERAL AND PROVINCIAL LOANS AND BURSARIES

In all cases, the basic qualification is that applicants must be Canadian Citizens or Permanent Residents with one year's residency, without pursuing full-time studies, and domiciled in the province to which they apply.
When students apply for financial assistance from the government (Canadian or non-Canadian), and certification of student status is required on the application form, this certification is obtained from the Financial Aid Office.
In all provinces except Québec, the provincial authority listed below administers the Canada Student Loan Plan (Federal) as well as their own programmes.

List of Appropriate Provincial Authorities

ALBERTA
Student Finance Board
10th Floor Baker Centre
10025 - 106 Street
Edmonton, Alberta
T5J 1G7
Tel: (403) 427-2740

BRITISH COLUMBIA
Student Services Branch
Ministry of Post-Secondary Education
Parliament Buildings
Victoria, British Columbia
V8V 1X4
Tel: (604) 387-4611

MANITOBA
Student Aid Branch
Box 6, 693 Taylor Avenue
Winnipeg, Manitoba
R3M 3T9
Tel: (204) 945-6322

NEW BRUNSWICK
Department of Youth and Recreation
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1
Tel: (506) 453-2577

NEWFOUNDLAND & LABRADOR
Canada Student Loans Authority
Department of Education
Confederation Building
St. John's, Newfoundland
Tel: (709) 576-2688

NORTHWEST TERRITORIES
Department of Education
Student Services Section
Yellowknife, Northwest Territories
X1A 2L9
Tel: (403) 873-7194

NOVA SCOTIA
Student Aid Office
Province of Nova Scotia
P.O. Box 2290, Station M
Halifax, Nova Scotia
B3J 3C8
Tel: (902) 424-8420 (or 7737)

PRINCE EDWARD ISLAND
Canada Student Loans Committee
Department of Education
P.O. Box 2000
Charlottetown, Prince Edward Island
C1A 7N8
Tel: (902) 892-3504

SASKATCHEWAN
Saskatchewan Advanced Education
and Manpower
Student Financial Services
1855 Victoria Avenue
Regina, Saskatchewan
S4P 3V5
Tel: (306) 565-5620

CANADA STUDENT LOAN
Department of the Secretary of State
of Canada
Student Assistance Directorate
P.O. Box 2090, Station D
Ottawa, Ontario
K1P 6C6
Tel: (819) 994-1844

ONTARIO
Students Awards Office
Ministry of Colleges & Universities
8th Floor, Mowat Block
Queen's Park
Toronto, Ontario
M7A 2B4
Tel: (416) 965-5241

QUÉBEC
Ministère de l'enseignement supérieur
et de la science
Direction générale de l'aide
financière aux étudiants
1033, rue de la Chevrotière
Québec, Québec
G1R 5K9
Tel: (418) 643-3750

YUKON
The Student Financial Assistance
Awards Committee
Superintendent of Education
Box 2703
Whitehorse, Yukon Territory
Y1A 2C6
Tel: (403) 557-5141

18.3.6 INTERNATIONAL STUDENTS

American Students:
Students coming to a Canadian university from the United States may apply for a Higher Education Loan Plan through their hometown bank. These forms must be sent to Concordia University for completion. Due to the limited amount of funds available, it is essential that application be made as early as possible.

Students from Other Countries:
The scholarships, bursaries and loans offered through Concordia University and external agencies are generally not available to overseas students. Students studying on a Student Visa who require financial aid should, therefore, contact their home country's Department of Education.
The Canadian International Development Agency offers training assistance to most developing countries with which Canada has a co-operative agreement; however, students must be nominated by their own government. For further information, contact the Scholarship Committee, Human Resources Directorate, Canadian International Development Agency, 200 Promenade du Portage, Hull, Québec, K1A 0G4.
Students should try to obtain adequate finances before coming to Canada. If students do not plan to return home during the summer, four additional months of living expenses should also be provided for.

18.3.7 GOVERNMENT OF CANADA AWARDS AND SCHOLARSHIPS

Natural Sciences and Engineering Research Council of Canada (NSERC):
The function of the Natural Sciences and Engineering Research Council of Canada is to promote and assist research in the natural sciences and engineering (other than the health sciences), and to advise the Minister in respect of such matters relating to such research as the Minister may refer to the Council for consideration.
The Natural Sciences and Engineering Research Council of Canada (NSERC) offers a number of awards programmes to assist in the provision and development of highly qualified scientists and engineers.

University Undergraduate Student Research Awards:
University undergraduate student research awards are intended to stimulate the interest of undergraduate students in research by providing them with valuable experience in a university laboratory, and to encourage these students to undertake graduate studies.

Eligibility:
University undergraduate student research awards are available to Canadian Citizens and Permanent Residents who, at the time of application, are registered as full-time students in an eligible undergraduate programme in the natural sciences or engineering. During tenure of these awards, students must not have more than four terms of academic work remaining for completion of their bachelor's degree and must not

have started a programme of graduate studies. They must have obtained a cumulative standing of at least second class (B) in their previous years of study. During the course of the work period, they must be exposed to research and development activities.

Students are eligible if they are registered in a bachelor's degree programme leading to an Honours degree or a degree with a Major. In the case of a degree with a Major, the programme should involve sufficient specialization, and students should have achieved a high enough academic standing that they could be expected, upon graduation, to gain admission directly to a master's degree programme at a Canadian university. Students registered in general degree programmes are not eligible to hold undergraduate student research awards.

Undergraduate Awards for Women Students:

In 1990-91, a new programme of Undergraduate Student Research Awards was instituted specifically for women undergraduates in the physical sciences and engineering. The objective of these awards is to give women who are embarking on a degree programme in engineering or the physical sciences valuable introductory research experience in a university or industrial laboratory. It is hoped that the experience so gained will stimulate their interest in pursuing their studies at the graduate level, and that they will someday seek careers in scientific or engineering research. NSERC recognizes that women are seriously under-represented in these fields at all levels. This programme is intended to be a mechanism whereby more women are attracted to, and retained in, engineering and the physical sciences, thus addressing an anticipated shortage of qualified engineering and scientific personnel in the coming decades.

Canada Scholarships Programme:

The aim of the Canada Scholarships Programme (C.S.P.) is to reward academic excellence and encourage more of Canada's most promising students to choose careers in science and engineering. A number of scholarships are available to Concordia University students who are entering eligible disciplines. The scholarships are valued at $2,000 per year, and are renewable up to three times or until the degree is completed. At least half of the scholarships are awarded to women.

Students may apply for a Canada Scholarship if they are Canadian Citizens or Permanent Residents, and are planning to enter full-time, first-year studies in an eligible discipline. The application forms are available from high school or CEGEP guidance services, or from the University Financial Aid Office. Recipients are required to maintain a full course load, usually 30 credits, and maintain a Grade Point Average (GPA) of at least 3.40.

Applications must be received no later than June 22 for students entering undergraduate studies in September, and October 31 for students entering in January. For further information, inquire at the Financial Aid Office.

18.4 Student Life and Student Services

Dean of Students
BRIAN T. COUNIHAN

Assistant Dean
ANN KERBY

Financial Aid
ROGER CÔTÉ

International Student Adviser
CLAUDETTE FORTIER

Health Services
NANCY TORBIT

Campus Ministry
ROBERT NAGY

18.4.1 STUDENT LIFE AND STUDENT SERVICES

Specialized services and programmes for students are offered on each campus under the auspices of the Dean of Students. They include financial aid, legal information, services for disabled students, chaplains, services for International students and health centres. Numerous activities are designed to enrich student life and broaden students' university experience.

The Concordia Council on Student Life, a body responsible for student service policies and budgets, studies the range of student life on both campuses. It is composed of 8 students, 2 faculty members, 6 members of the student services staff. The Vice-Rector, Services chairs the Council. Its meetings are open to all members of the University community.

18.4.2 SOCIAL AND CULTURAL ACTIVITIES

Orientation

Orientation is designed to familiarize new students with the various services and facilities available to them, and to help new students resolve any problems that may be encountered during their introduction to university life.

Social and Cultural Activities

A wide variety of social and cultural events are presented regularly by various student organizations and departments. The Concordia orchestra and choir are open to students, and they perform several concerts annually. There is a students' cafeteria and pub on each campus. The Loyola Campus Centre also provides lounge facilities and a games room.

18.4.3 HEALTH SERVICES

The Health Services provide an individualized and comprehensive approach to Health Care including counselling and teaching related to physical and mental health. They operate on a clinic basis with a varying schedule of physician coverage. Nurses who are experienced in dealing with health concerns of university students are available without appointment. Appointments with the various physicians can be made in consultation with a nurse. For those problems which are not within the scope of the Health Services, referral to existing community resources and specialists is arranged.

Loyola Campus
Centennial Building, Rm. 101
Tel: 848-3575

Sir George Williams Campus
2155 Guy Street, Rm. 407
Tel: 848-3565

Office Hours:
9:00 a.m. to 5:00 p.m. Monday to Friday
Closed from 12:00 noon to 1:30 p.m. Monday to Friday.

Health Services is available to all students, staff and faculty both full- and part-time.

18.4.4 LEGAL INFORMATION SERVICES

Advice and help are offered to students requiring assistance on matters relating to their legal rights. An appointment to see a lawyer can be arranged.
Commissioners of Oaths are also available.

Loyola Campus
Legal Information Services
Central Building, Room 326
Tel: 848-4960

18.4.5 RESIDENCES AND HOUSING

RESIDENCES—Loyola Campus Only

Two buildings provide on-campus accommodation for 250 students. Hingston has a modern dormitory style while Langley has traditional apartment-styled rooms. Both halls are co-ed with the exception of an all-women section in Langley. Rooms are furnished. Communal kitchens and public telephones are on each floor. Lounges have colour T.V.'s while games rooms have pool and ping pong tables. Laundry facilities and personal mailboxes are located in each building. Many activities and outings are organized for resident students.

By law, students are required to sign leases. These leases will follow the academic year (September to May). Students wishing to contract for only one semester can apply for special arrangements.

Residence Fees

Room rates are the same at both Hingston and Langley Halls. The 1990-91 Room Rates are as follows: (These rates do NOT include meal service.)

Single Room	$1,704.00 ($213.00 a month)	Double Room	$1,472.00 ($184.00 per person a month)

While effort will be made to meet special requests for specific rooms or particular locations, assignments will depend upon availability of space. Since the number of rooms is very limited, applications should reach the Director as soon as possible. The deadline for applications is March 1. Students applying after that date will be placed on a waiting list. Since **acceptance to the University does not guarantee admission to residence,** a separate application for on-campus housing must be sent to:

Julia Denker
The Director of Residences
Room 156, Hingston Hall
Loyola Campus
Concordia University
7141 Sherbrooke Street West
Montréal, Québec, H4B 1R6

OFF-CAMPUS HOUSING

A computerized housing list is available at CUSA, Hall Building, Room 637, Tel: 848-7474.

CHILD CARE

Child Care Services are offered for children of students, faculty and staff.

On the Sir George Williams Campus parents may enroll children 2½ to 5 years of age in the *Garderie Concordia* located at 2305 St. Marc Street. Application forms and details may be obtained at the information desk in the Hall Building or at the centre. Tel: 848-8789.

La Garderie les P'tits Profs is located on the Loyola Campus in the WB Annex. This "family centre" has a capacity for 37 children: 5 infants from 3 to 19 months, and 32 children from 18 months and over. For more information about this child care service, please call 848-7788.

18.4.6 CAMPUS MINISTRY

Campus Ministry offers programmes and pastoral services for the University community. Chaplains work with students, staff and faculty integrating and assimilating common concerns into worship, studies and prayer. It is an ecumenical ministry representing the major religious denominations. Chaplains are available for spiritual direction and pastoral counselling. The Loyola Chapel is for public worship, as well as a quiet place for private reflection.

Offices on both campuses are a place for students to gather informally and socially as well as being the location for various Campus Ministry events and social outreach programmes.

Loyola Campus
Belmore House
(Behind Campus Centre)
Tel: 848-3588

Sir George Williams Campus
Annex Z
2090 Mackay
Tel: 848-3591

18.4.7 SERVICES FOR DISABLED STUDENTS

Students with visual or hearing impairments, mobility limitations or learning disabilities may require special services while studying at Concordia. Services include orientation, tutors, notetakers, classroom relocation, special exam arrangements, and equipment resources. Tape recorders, FM personal systems, and personal computers with voice and braille output are available for on-campus use. Workshops are offered in Sign Language, Wordprocessing and VersaBraille. All students with disabilities are advised to contact the Coordinator as early as possible for assistance in meeting their special needs.

Loyola Campus
Administration Bldg., Room 121
Tel: 848-3501
848-3536/Voice & TDD

Sir George Williams Campus
Hall Building, Room 580
Tel: 848-3525/Voice & TDD

18.5 Lacolle Centre for Educational Innovation

The Lacolle Centre for Educational Innovation is a resource for developing and testing innovations in education. It is involved in conducting research and developing innovative learning formats and materials. By cooperating with other academic departments, the Centre is at the forefront of current innovative learning in many different disciplines.

The Centre also provides personal and professional development for members of the University community; health, social and education professionals; trainers, volunteer workers; senior citizens and other members of the general public. Workshops are scheduled on both campuses and at Concordia's residential facility in Lacolle, Québec. Faculty or staff who have an expertise in an area that would be of interest to the general public and who would be willing to conduct a workshop or present a lecture may call the Director.

Residential Facility

The residential facility is located forty miles south of Montréal near Lacolle, Québec. The hundred and fifty year old farmhouse occupies twenty acres of lawn and natural woodlot about four miles southwest of Lacolle village. The primary goal of this centre is to ensure that its users will, by working collaboratively at Lacolle, discover ways to enhance their educational pursuits on the University campus. The residential facility is an environment designed to promote the development and understanding of relationships among people. It also provides the opportunity to explore new and creative approaches to learning.

Applications and Procedures: Three times a year, letters are sent to all departments and student associations inviting requests for use of the facility. Applications should be submitted in writing to the Director, and indicate briefly: name of group, requested dates (with alternatives), purpose of visit, expected number of persons to attend.

The rental fee is $75.00 per day, per group.

Contact: Olivia Rovinescu, Director
Diane Moffat, Secretary (848-4955)
2480 West Broadway (WG-204)

18.6 International Students

An International Student Adviser is available to provide special services and programmes to promote and support the growth and development of International students. The services include:

- administration of emergency loans;
- assisting students with personal problems and concerns with referrals to appropriate departments, if necessary;
- assistance with immigration matters;
- coordination of all campus and community services available to International students;
- acting as the liaison with sponsoring agencies and governmental sponsors of students;
- writing letters for the military;
- writing letters for the transfer of funds;
- orientation sessions.

As soon as International students arrive at Concordia University, they should visit the International Student Office to meet the International Student Adviser and other staff members who will familiarize students with the publications and services available to them.

18.6.1 IMMIGRATION PROCEDURES

Since Canada has two levels of Government, Federal and Provincial, all persons, other than Canadian citizens and Landed Immigrants, who wish to pursue their studies in the Province of Québec, must obtain a *Certificate of Acceptance* (C.A.Q.), and a Federal *Student Authorization* before Canada Immigration can issue a *Student Authorization*. As it may take several months to obtain the *Student Authorization*, the application process should be started **immediately** upon receipt of the letter of admission from Concordia University.

When applying for the *Québec Certificate of Acceptance* and the *Canada Student Authorization*, the International student will be required to present evidence of sufficient funds for tuition and living expenses before being admitted to Canada. Evidence of financial support may be:

- an updated bank book with proof of ownership and, if necessary, documents attesting to other sources of income;
- a notarized statement of the willingness and ability of another person to support the student while he or she remains in Canada;
- authorization to transfer funds from the organization which controls currency in the student's country;
- a bursary attestation or confirmation of a financial award, specifying the monthly or annual amount, if necessary.

18.6.2 EMPLOYMENT AUTHORIZATION

A new employment policy was implemented on June 16, 1988, by the Canadian Government allowing International students to seek and accept employment *on campus only*.

However, temporary employment will not be considered as a source of funding, except for graduate students receiving offers of employment, in writing, from their faculty as research or teaching assistants at Concordia University. Canadian officials continue to require proof of financial support before issuing a *Student Authorization*. Therefore, students must be certain that funding has been arranged before leaving for Canada.

Students accepting graduate assistantships (teaching or research) will have to obtain an *Employment Authorization* from the Canadian Embassy or Consulate in their country or at a Montréal Immigration office in order to receive payment for their work. Further information on how to apply for an *Employment Authorization* can be obtained from the International Student Office.

Spouses of students are also allowed to work both on- and off-campus, providing they can prove that they are the spouse of a holder of a *Student Authorization*. However, if the spouse is also an International student, he or she will be restricted to on-campus employment only.

18.6.3 STUDENT HEALTH AND ACCIDENT INSURANCE

Since International students are normally ineligible for government health insurance benefits, the Québec Immigration Services require that all International students participate in a compulsory health insurance plan. To this end, the University has negotiated such a plan on behalf of all International students.

The single coverage premium for the 1991-92 academic year is $335.00 (subject to change). Coverage is from August 15, 1991, to August 14, 1992. Students who register in January 1992 pay a pro-rated premium for the 8-month period ending August 14, 1992.

Students who have diplomatic status, *Work Authorizations*, or who have other valid reasons or health plans can apply for a waiver from the Dean of Students Office on the Loyola Campus (Room AD-121; Tel.: 848-3536) prior to October 31, 1991.

18.6.4 TUITION FEES FOR INTERNATIONAL STUDENTS

Tuition fees, which are determined by the Québec Government and payable to the University for the regular session of two terms, commencing in September and concluding in April, are approximately $6,100 for a full-time student. This amount covers tuition fees for 30 credits (including association and student service fees, and is based on the 1990 rate of $195.00 per credit).

Normally, full tuition fees are payable at registration. Those who elect to pay in two instalments must pay a minimum of 50% of their tuition fees at the August or September registration and the balance in January. Please note that unpaid balances will be assessed by a charge of 1.04% per month (subject to change) beginning one month after registration.

Exemptions from Differential Fees

Certain International students may be eligible to pay the same fees as Canadian students. Students who qualify for an exemption from the differential fees for International students pay the regular tuition fee of $880 plus incidental fees (30 credits). The following are among those exempted from paying differential fees:

1. Diplomats, consular personnel, duly accredited representatives or civil servants of a foreign country, the United Nations or of one of its organizations, of an intergovernmental organization to which Canada belongs or any member of the staff of the above-listed persons who are working in Canada in an official capacity.
2. The spouse and unmarried children of the above-listed persons.
3. The spouse and unmarried children of a person bearing certain work permits. For further details, please get in touch with the Registrar's Office, Room C-520, Tel.: 848-2622.
4. A student who is duly registered at a university and who has come to Québec as an exchange student or as a student participating in a programme of cooperation agreed to by the Government of Québec and which exempts the participants from paying differential fees.
5. A student who is a French Citizen (accord cadre France-Québec).
6. A student who is duly admitted to a Québec university and whose country has a fee remission agreement with the Québec Government. As of February 1, 1989 the Government of Québec has agreements for granting a limited number of exemptions from the differential fees for International students from the following countries:

   Algeria, Argentina, Benin, Bolivia, Brazil, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, China, Colombia, Comoros, Congo, Costa-Rica, Côte d'Ivoire, Djibouti, Ecuador, Gabon, Guinea, Haiti, Honduras, Kenya, Korea, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mexico, Morocco, Niger, Panama, Peru, Rwanda, Senegal, Togo, Tunisia, Uruguay, Venezuela, Zaire.

   Inquiries and application for an exemption should be made directly to the student's own Ministry of Education prior to leaving their home country.
7. A student who is registered at a university and whose status as a convention refugee or landed immigrant has been recognized.
8. A student who is registered at a university in a programme of studies which is specifically exempted by their Ministry of Education. At Concordia University, this refers to:
   - Honneurs en littératures de langue française;
   - Spécialisation en littératures de langue française;
   - Majeure en études françaises - Option: littérature - Option: langue - Option: enseignement du français;
   - Certificat d'enseignement du français langue seconde aux adultes;
   - École française d'été;
   - A masters or doctoral student who has been granted a fee remission from Concordia University.

   Inquiries and applications should be made to the Council for International Academic Cooperation, Tel.: 848-4987.

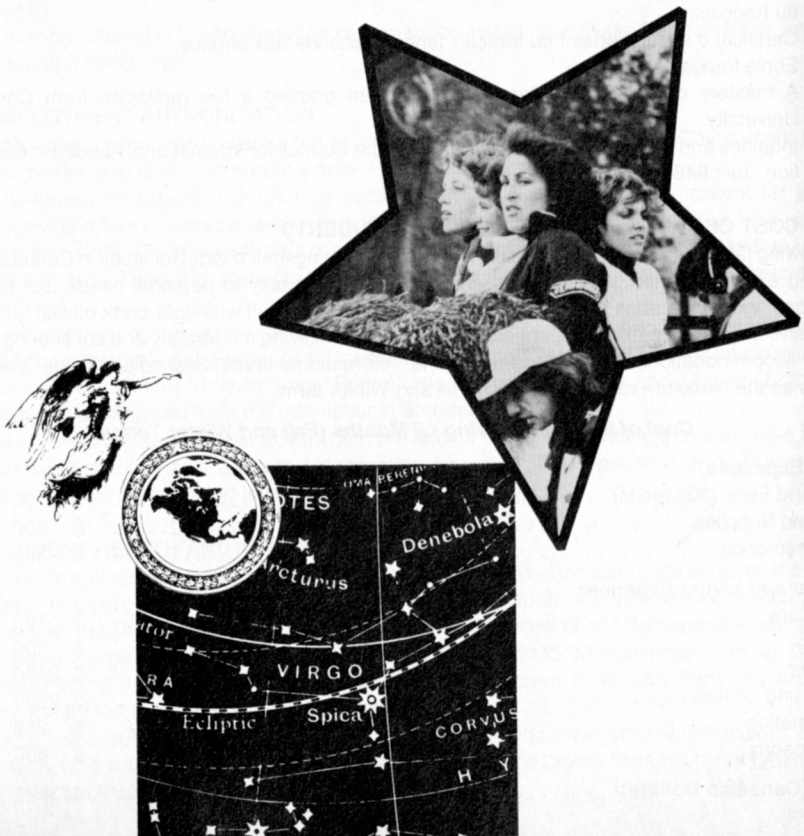
18.6.5 COST OF LIVING FOR INTERNATIONAL STUDENTS

The following table will assist International Students in preparing their budget for study in Canada. Personal and living expenses listed are estimates and are subject not only to personal needs, but to currency fluctuations, exchange rates, and inflation. It is advisable to consult with your bank official for advice on these matters. The estimated costs are based upon a student living moderately and not sharing expenses such as accommodation, food and the telephone. International students should consider the following amounts as the minimum required for each Fall and Winter term.

Cost of Study and Living - 8 Months (Fall and Winter Terms)

School Expenses	
Tuition and Fees (30 credits)	$ 6100
Books and Supplies	$ 600
Health Insurance	$ 335
Personal and Living Expenses	
Dental Care	$ 160
Clothing	$ 500
Groceries	$ 2400
Lodging and Utilities	$ 2500
Transportation	$ 280
Miscellaneous	$ 800
TOTAL (Canadian Dollars)	**$13675**

SECTION 19



STUDENT ASSOCIATIONS

19.1 UNDERGRADUATE STUDENTS

19.2 GRADUATE STUDENTS

19.3 ALUMNI

19 Student Associations

19.1 Undergraduate Students

The **Concordia University Students' Association (CUSA)** represents the undergraduate students, both full-time and part-time. Besides organizing a considerable number of events and activities, CUSA ensures student representation on University decision-making bodies, both those that legislate on academic and administrative matters and those concerned with the cultural and social life of the community. There are student members of the Board of Governors, Senate, the Faculty Councils, and, of course, the Concordia Council on Student Life, which is directly concerned with the provision of student services.

Powers and responsibilities are divided between three bodies: the Executive, the Legislative Council, and the Judicial Board. The Executive is headed by two elected co-Presidents. The Legislative Council consists of the elected representatives of the four Faculties. The Judicial Board is an appointed body charged with assuring the constitutionality of any new legislation.

There are more than 75 member clubs and associations. They may be associated with a department or discipline like the Psychology Students Association or pursue a special interest like the Debating Society. Each has its own programme of activities, which receives funding from CUSA. In addition there are numerous clubs and associations for students of particular ethnic backgrounds.

Other activities that come under the CUSA umbrella are student newspapers, *The Link* and the *Concordian,* television station *CUTV,* radio stations *CIRL* and *CRSG,* and the Concordia Winter Carnival. The two student newspapers, *The Link* and the *Concordian,* operate independently of CUSA. Both newspapers are incorporated, with separate, wholly autonomous boards of directors.

There is a CUSA office on each campus. The Sir George Williams office is in Room H-639 of the Henry F. Hall Building (848-7474). The Loyola office is in Room 103 in the Campus Centre (848-7470).

19.2 Graduate Students

Graduate students become members of the Graduate Students' Association (GSA). It is concerned with graduate student representation on the decision-making bodies and initiates a wide range of activities for graduate students and the University community as a whole, including social occasions, lectures and concerts. The association publishes a regular newsletter. Its offices are at 2030 Mackay Street.

19.3 Alumni

The **Concordia University Alumni Association Inc.** was created in 1983. In the words of its constitution, the Association is designed to "encourage the fellowship of graduates from Loyola, Sir George Williams, and Concordia University through social, educational and cultural activities", and to "preserve and promote the interests of Concordia University through Alumni involvement in its future and governance".

All graduates of the University are automatically members of the Association, as are graduates of Loyola College and Sir George Williams University. Both full- and part-time students who have attended the University, and who have successfully completed a full academic year or its equivalent, can also become members.

The affairs of the Association are overseen by a 30-member Board of Directors consisting of the President, Immediate Past President, Vice-President, Secretary, Treasurer, the Loyola Alumni Association President and the Association of Alumni Sir George Williams President. The remaining 23 Directors are elected from the general membership of the Association.

The Concordia University Alumni Association offers alumni a variety of educational, cultural and social programmes, as well as the opportunity to participate in University governance through committee and board involvement. All members of the Association are entitled to our graduation photography service, the Concordia University Magazine, tracking assistance, travel benefits and the Concordia University MasterCard. Graduates are also encouraged to enroll in our Enhanced Benefits Programme so that they can take advantage of continued library privileges, discounts on home/auto and life insurance, and fitness and health programmes.

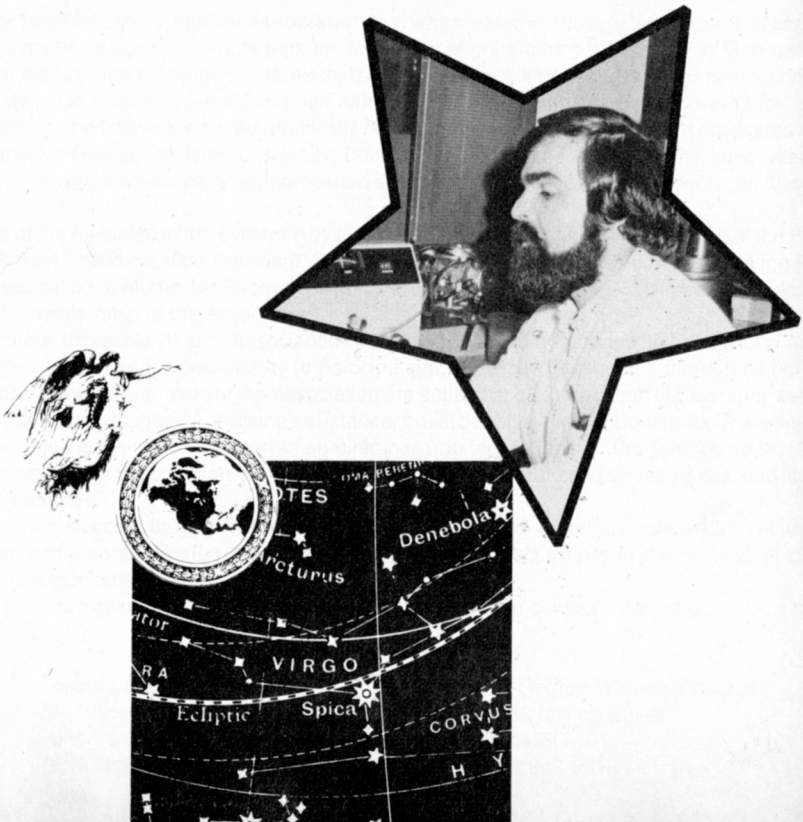
The Association is committed to the development of a network of Alumni chapters. Currently, we have active alumni in Toronto, Boston, New York and Hong Kong, and we are in the process of cultivating chapters in several other cities across North America.

For more information on the Association and its activities, please contact either of our two offices listed below.

Loyola Campus
7141 Sherbrooke Street West
Suite CC-324
Tel: 848-3823

Sir George Williams Campus
1463 Bishop Street
Suite BC-101
Tel: 848-3818

SECTION 20



CENTRE FOR CONTINUING EDUCATION

20.1 BUSINESS AND ADMINISTRATION SECTION

20.2 CONTINUING EDUCATION LANGUAGE INSTITUTE

20.3 APPLIED ARTS

20.4 EDUCATIONAL TRAVEL PROGRAMME

20.5 CONTINUING EDUCATION COMPUTER INSTITUTE

20.6 SEMINARS AND WORKSHOPS

20 Centre for Continuing Education

Director
RICHARD J. DIUBALDO
Tel: 848-3601

Assistant Director and Coordinator of Applied Arts Section
DOREEN BATES
Tel: 848-3603

Administrator of Business and Administration Section
MURRAY SANG
Tel: 848-3605

Administrator of Computer Institute
PATRICIA HAMILTON
Tel: 848-3606

Administrator of the Language Institute
GWYNN CHERRIER
Tel: 848-3607

Coordinator of the English Programmes
P. CHARLES BROWN
Tel: 848-3610

Office of the Centre
1822 de Maisonneuve Blvd. West

As part of its commitment to the life-long pursuit of education, Concordia University, through its Centre for Continuing Education, sets out to meet the learning needs and interests of the vast number of adult learners who seek educational activities outside the regular degree or certificate programmes of the University. Courses offered by the Centre are designated as "non-credit", but only in the sense that they may not be counted towards any of the degree or certificate programmes offered by the Faculties of the University. Most of the Centre's courses are part of practical programmes leading to certificates of achievement awarded by the Centre to those who successfully complete the required work. A wide variety of such programmes and courses is offered, and these are reviewed and supplemented on a regular basis to ensure that they satisfy the changing needs of the community.

20.1 Business and Administration Section

CEBS — The Certified Employee Benefit Specialist Programme: The CEBS programme is a ten-course curriculum cosponsored by the International Foundation of Employee Benefit Plans and the Centre for Continuing Education, Concordia University. It offers an opportunity to earn the professional designation: Certified Employee Benefit Specialist. The programme has a threefold purpose: 1) to enhance individual capabilities for fulfilling responsibilities in the employee benefit sector at a high performance level; 2) to bestow a measure of professional recognition on those persons who achieve significant competence in the field, as evidenced by passing a series of national examinations; and 3) to assist the public in evaluating the academic qualifications and competence of persons having responsibilities for employee benefit plans.
Dalhousie University is responsible for academic content and standards of the programme; the International Foundation is responsible for overall administration and jointly they issue the final certification.

Communications Programme: The Centre for Continuing Education offers six different Certificate Programmes in the field of communications. These include: *Journalism*, *Advertising*, *Public Relations*, *Graphics*, *Radio and Television Production* and *Specialized Writing*. All courses are taught by practitioners who work in the media or related fields.

Hospitality Management Programme: This practical programme is available to individuals who wish to receive training in the special skills required to manage hotels, restaurants, and institutional and commissary food-service establishments. Each course is made up of 12 weekly two-hour classroom sessions given in the evenings. Ten courses must be successfully completed to obtain the Certificate of Hospitality Management.

Management Practices Programme: This series of courses in management and administrative subjects is offered to individuals who wish to expand their knowledge in selected business fields. Each course will concentrate on one important area of business activity.

Purchasing and Inventory Control: This programme is designed for individuals who are beginning or planning to begin a career in Purchasing and Inventory Control. A Certificate in Purchasing and Inventory Control will be awarded upon successful completion of ten courses.

Small Business Management Programme: This programme has been developed as a "how to" guide for the upcoming entrepreneur. It offers information pertaining to questions raised when assuming the risk of a business or enterprise. To qualify for the Certificate in Small Business Management, candidates must successfully complete a total of ten courses — five compulsory and any five elective courses offered in the Small Business Management Programme.

Tourism Programme (Day or Evening Division): The Tourism Programme is designed to train individuals for work in travel agencies, airlines, travel departments and other enterprises connected with the tourism industry. The courses are available to individuals considering tourism as a career and to travel agency employees who are interested in up-grading their skills. Nine courses must be successfully completed to obtain the Certificate in Tourism.

Interest courses are also available in: Tax Planning and Investments; A Guide to Real Estate Investment; Trading in Options and Stocks; and Stocks, Bonds and Other Investments, and Property Acquisitions.

20.2 Continuing Education Language Institute

The Continuing Education Language Institute is a division of the Centre for Continuing Education established to meet the need for year-round language programmes in English and French. These non-credit courses are designed to meet the needs of students seeking language training for professional, social and academic purposes. Day, evening and Saturday courses are offered from September to April. A five or ten-week intensive English Programme is also offered during the Summer.
Students may choose one of several programmes ranging in intensity from four to twenty-four hours a week. Class size is limited to ensure maximum student/instructor contact.
Members of the staff of the Institute have specialist training and experience in second language teaching.

The English Language Programme
There are three distinct English language programmes offered on a regular year-round-basis — the Intensive, the Evening, and the Saturday programmes.
A Certificate of Proficiency will be awarded upon successful completion of the Advanced level.
For students who meet the necessary requirements, writing workshops are offered.

The French Language Programme
Courses at all levels are offered in the French language and are designed with specific vocabulary and language skills that provide for real life situations. The aim is to have students develop a maximum confidence in the use of the French language in personal and professional situations.

For students who meet the necessary requirements, the following specific courses are offered:

- a course in written French
- a general business course for those who already possess a working knowledge of French.

A Certificate of Proficiency will be awarded to students who meet the necessary requirements.

Special Programmes
Special language courses in English and French can be created to suit the needs of individual groups. Sponsoring agencies should write directly to the Institute for further information.

20.3 Applied Arts

Fashion Designing and Pattern Making: This programme is offered to train students in a professional manner for the garment industry. A certificate will be granted upon successful completion of all courses. Each course is made up of 12 three-hour classroom sessions given once a week in the evening.

Practical Photography: This programme consists of six-week, ten-week, and twelve-week courses at various levels, ranging from the basics of camera operation or darkroom procedures to courses providing an opportunity for those with more experience to refine and expand their photographic skills and vision. The courses combine lectures with hands-on participation.

Instructor Certification Programme in Physical Fitness: This Certificate Programme will provide the individual with the theoretical and practical knowledge necessary for employment as a general fitness instructor. A certificate in general fitness instruction will be granted to those participants who successfully complete both the theoretical and practical components of the programme.

Visual Arts: The Visual Arts Programme offers interested students the opportunity to work with professional artists of the Montréal community in drawing, painting and life drawing. Each course is made up of 12 three-hour sessions given once a week in the evenings.

20.4 Educational Travel Workshops

The Centre for Continuing Education, in cooperation with the academic departments of the University, organizes a number of travel programmes. Some of the courses, which are generally scheduled between May and August, are regular Concordia offerings under the academic direction of a faculty member, and carry academic credit. The physical and personnel resources of academic business and social institutions in other countries enhance the academic and cultural components of the courses.

20.5 Continuing Education Computer Institute

Computer Applications Programming (Day Division): The Centre for Continuing Education offers a Certificate in Computer Applications Programming for individuals who require a solid background in business programming and systems analysis skills. Extensive "hands-on" experience will be provided on the Centre's own computing facilities, in addition to regular classroom teaching. To qualify for the Certificate, students must complete three intensive full day courses; each course has a duration of 10 weeks with 25 hours of theoretical and practical work per week, and an assignment week at mid-term.

Managing Information Systems: This programme is intended for individuals who require a solid background in the management and application of computers to business systems. To qualify for the Certificate in Managing Information Systems, students must successfully complete a total of ten courses and two DOS workshops, either in Option 1: Information Systems Management or Option 2: Software Engineering.

Office Automation: The Centre for Continuing Education offers a Certificate Programme in Office Automation for students interested in acquiring the "high-tech" microcomputer skills needed in business and industry today. Students must successfully complete nine courses in order to obtain the Certificate. Students may take any course on an independent basis.

Complete Computer Electronics: This programme is helpful to those interested in working as computer or electronic technicians, and operates through a combination of home study and periodic laboratory work in the Physics Department of the University. Complete Computer Electronics is divided into two parts during which the student actually builds a digital computer. Part I covers background work in electronic fundamentals, and Part II covers computer circuitry, digital logic techniques, computer organization and operations.

Electronic Office Technology — Full-Day Summer Programme: The Centre for Continuing Education offers a full-day, intensive Certificate Programme in Electronic Office Technology during the summer for individuals who wish to develop the specialized skills necessary to function in today's automated office or small business. The programme combines the practical material contained in the Office Automation Programme with additional elements designed to equip the students with the background to make effective managerial decisions in this area. The Certificate Programme has a duration of 10 weeks with 25 hours of instruction and lab hours per week.

20.6 Seminars and Workshops

The Computer Institute is dedicated to the continuing education needs of professionals, business personnel and others who wish to enrich their own lives with the computer knowledge and skills that are so necessary in today's technical environment. For this reason, the Institute has designed a number of practical seminars and workshops which are given throughout the year, either in the Centre's own well-equipped computer facilities, at other designated seminar locations or on-site, where training is required.
In addition, the Business and Administration Section offers seminars and workshops for those individuals who wish to develop their managerial skills.

SECTION 21

OFF-CAMPUS EDUCATION AND DISTANCE LEARNING

21.1 OFF-CAMPUS EDUCATION

21.2 REGISTRATION FOR OFF-CAMPUS CREDIT COURSES

21.3 DISTANCE LEARNING

21 Off-Campus Education

21.1 Off-Campus Education

Concordia University offers credit courses off campus during the Regular (Fall/Winter) and Summer sessions. The courses are designed to be of interest to persons who find it inconvenient, for whatever reason, to attend classes on either campus. The University is prepared to offer courses wherever there is a sufficient demand, provided that qualified instructors are available. Off-Campus courses have the same credit value as On-Campus courses.
Last year, courses were given in Pointe Claire, Beaconsfield, and at various cultural centres (e.g. Saidye Bronfman Centre) throughout the Island of Montréal. Courses were offered from the Faculties of Arts and Science, Commerce and Administration.

Persons interested in obtaining further information about programmes, or in having courses offered at a particular location, should contact the office of:

Off-Campus Education
7141 Sherbrooke Street West
Room AD-420
Montréal, Québec, H4B 1R6
Tel: 848-3955/3956

21.2 Registration for Off-Campus Credit Courses

It should be noted that registration in a course does not constitute admission to the University. While registration as an Independent student is possible, those registering for courses are encouraged to apply for admission to the University. To obtain information about registration for off-campus courses, call 848-3955/3956.

21.3 Distance Learning

Distance learning is not a new concept; university level correspondence courses have been available from various sources for many years. Today, thanks to the new technologies, courses may be offered via such media as audiotape, videotape, cable tv, teleconferencing, satellite or computers.
The distance mode satisfies a need for capable and talented students who, for professional or personal reasons, cannot attend university or are located in remote areas with no access to higher education.
One of the media used by Concordia is *C.A.N.A.L.* (Consortium pour l'Avancement de Nouvelles Applications des Langages/The Corporation for the Advancement of New Applications of Languages). This non-profit organization is a consortium of Québec universities and colleges set up to provide broadcast facilities for the distribution of credit and non-credit courses. The consortium operates a television station on UHF Channel 29, which is also carried on Cable Channel 23 in the Montréal area and several other regions of the province. Many of the credit courses are also carried over the Radio Québec network.

For further information please contact the Concordia Centre for Off-Campus and Distance Learning, Tel. (514) 848-3955.

SECTION 22

TEACHER CERTIFICATION AND PROGRAMMES OF INTEREST TO TEACHERS

22.1 INTRODUCTION

22.2 INITIAL CERTIFICATION PROGRAMMES

22.3 RE-CERTIFICATION PROGRAMMES

22.4 PROGRAMMES OF INTEREST TO TEACHERS

22.5 "BEYOND DEGREE (OR CERTIFICATE) REQUIREMENTS" NOTATION ON RECORD

22.6 CITIZENSHIP REQUIREMENTS

22.7 CERTIFICATION ASSISTANCE

22 Teacher Certification and Programmes of Interest to Teachers

Coordinator of Teacher Training and Certification

J. Fiset
Tel: 848-3952

Mailing Address:
Concordia University
7141 Sherbrooke St. West
RC-203

Office Location:
7308 Sherbrooke St. West
Room RC-205

22.1 Introduction

Concordia University is an approved centre for Teacher Training and Certification in the areas of Early Childhood Education, English as a Second Language and Fine Arts. This means that the Québec Ministry of Education recognizes the programme and grants to the successful graduate a licence to teach.

There are two types of programmes specifically designed for teachers available at Concordia: initial certification and re-certification. Students enrolled in initial certification programmes will, when they graduate, receive their first licence to teach. Re-certification programmes are designed for individuals who have an initial teaching licence and who wish to obtain certification in another area. Successful graduates receive an additional teaching licence from the Ministry of Education. In addition to the certification programmes there are numerous programmes available that may be of interest to teachers.

The above types of programmes are recognized for teacher classification, a process of relating an individual's qualifications to the salary scale of the Ministry of Education for the education sector. Please note that Certificate programmes are made up of undergraduate courses while Diploma programmes are at the graduate level and require a Bachelor's degree for admission.

Because Concordia University has not chosen to organize its programmes for teachers into a single Faculty, the courses and programmes for teachers are listed under several different departments and faculties. Potential students are advised to consult the specific academic departments for further information.

22.2 Initial Certification Programmes

Individuals who successfully complete the following programmes will be eligible for Québec Certification. For further information please contact the appropriate academic department.

1. Certificate in Education (Restricted to individuals presently teaching in Québec with a P.T.A.) (30 credits). See §31.090
2. Bachelor of Arts (Specialization in Early Childhood Education) (90 credits). See §31.090
3. Bachelor of Education (Teaching of English as a Second Language) (90 credits). See §31.320
4. Diploma in Art Education (30 credits).

22.3 Re-Certification Programmes

Individuals who have initial Québec certification and who successfully complete these programmes will be eligible to receive additional certification in the area of study. For additional information please contact the appropriate department.

1. Certificate in Art Education for Teachers, (Elementary School Level) (30 credits). See §81.50
2. Certificate in the Teaching of English as a Second Language, Sequences I and II (30 credits). See §31.320
3. Diploma in Early Childhood Education (30 credits).

22.4 Programmes of Interest to Teachers

The following programmes are not teacher certification programmes but are recognized by the Ministry of Education for Professional Development.

1. Certificate in Adult Education (30 credits). See §31.090
2. Certificate in Family Life Education (30 credits). See §31.010
3. Certificate in the History of Québec (30 credits). See §31.160
4. Certificate in Judaic Studies (30 credits). See §31.270
5. Certificate in Library Studies (60 credits). See §31.190
6. Certificate in Mathematics for Teachers (Elementary School Level and Junior Secondary School Level) (30 credits). See §31.290

7. Certificate in Teaching French as a Second Language to Adults (30 credits). See §31.110
8. Bachelor of Fine Arts (Specialization in Art Education) (90 credits). See §81.50
9. Diploma in Adult Education (30 credits).
10. Diploma in Advanced Music Performance Studies (30 credits).
11. Diploma in Art Therapy (30 credits).
12. Diploma in Communication Studies (33 credits).
13. Diploma in Computer Science (33 credits).
14. Diploma in Economics (30 credits).
15. Diploma in Institutional Administration (33 credits).
16. Diploma in Instructional Technology (30 credits).
17. Diploma in Library Studies (33 credits).
18. Diploma in Sports Administration (33 credits).
19. Diploma in the Teaching of Mathematics (32 credits).
20. Diploma in Theological, Religious and Ethical Studies (33 credits).
21. Diploma in Writing/Translation (French) (30 credits).
22. Master of Arts in Applied Linguistics (45 credits).
23. Master of Arts in Art Education (45 credits).
24. Master of Arts in Art History (45 credits)
25. Master of Arts in Art Therapy (45 credits).
26. Master of Arts in Child Studies (45 credits).
27. Master of Arts in Communication Studies (Media Studies) (45 credits).
28. Master of Arts in Educational Studies (45 credits).
29. Master of Arts in Educational Technology (60 credits).
30. Master of Arts in English (45 credits).
31. Master of Arts in the History and Philosophy of Religion (45 credits).
32. Master of Arts in Judaic Studies (45 credits).
33. Master of Arts in Public Policy and Public Administration (Option A) (45 credits).
34. Master of Arts in Public Policy and Public Administration (Option B) (60 credits)
35. Master of Fine Arts (90 credits)
36. Master of Science in Biology (45 credits).
37. Master of Science in Chemistry (45 credits).
38. Master of Science in Physics (45 credits).
39. Master in the Teaching of Mathematics (M.T.M.) (45 credits).
40. Doctor of Philosophy, Art Education (90 credits).
41. Doctor of Philosophy, Communication Studies (90 credits).
42. Doctor of Philosophy, Educational Technology (90 credits).
43. Doctor of Philosophy, Humanities (90 credits).

22.5 "Beyond Degree (or Certificate) Requirements" Notation on Record

When students so desire, courses previously completed and which were not counted towards their degree (or certificate) may be identified on the record as "Beyond Degree (or Certificate) Requirements". For further information contact Registrar's Services.

22.6 Citizenship Requirements

Permanent teacher certification in Québec is only available for Canadian Citizens. Students who have landed immigrant status or who hold an appropriate work permit at the time of their graduation may be eligible for a temporary licence to teach. Although students with a visa can complete teacher training programmes at Concordia University and receive a university degree, they are not eligible for certification by the Ministry of Education of Québec.

22.7 Certification Assistance

Students who encounter difficulties with respect to certification or classification should contact the Coordinator of Teacher Training and Certification. Graduates of Concordia with certification problems should contact the Directeur, Service de la Certification des Maîtres, 955 chemin St-Louis, Sillery, Québec, G1S 4S4.

SECTION 23

INSTITUTE FOR CO-OPERATIVE EDUCATION

23 Institute for Co-operative Education

Acting Principal
MURIEL ARMSTRONG, *Professor*

Assistant Principal
JOHN FISET

Fellows and Programme Directors
MORTON M. BELINSKY, *Associate Professor, Mathematics and Statistics (Director, Mathematics and Statistics Co-op)*
NELSON W. EDDY, *Associate Professor, Physics (Director, Physics Co-op)*
EDMUND F. ENOS, *Associate Professor, Exercise Science (Director, Exercise Science Co-op)*
CEDRIC MARSH, *Professor, Centre for Building Studies (Director, Building Studies Co-op)*
GRAHAM MARTIN, *Associate Professor, Computer Science (Director, Computer Science Co-op)*
JOHN W. O'BRIEN, *Professor, Economics (Director, Economics Co-op)*
RAYMOND H. ZIENIUS, *Associate Professor, Chemistry and Biochemistry (Director, Chemistry and Biochemistry Co-op)*

Fellow
M. POSNER, *Technical Coordinator, Chemistry and Biochemistry*

The University offers programmes in the co-operative format in the Departments of Chemistry and Biochemistry, Economics, Exercise Science, Mathematics and Statistics, and Physics in the Faculty of Arts and Science, and in the Centre for Building Studies and the Department of Computer Science in the Faculty of Engineering and Computer Science.
As it becomes feasible the University may consider offering other disciplines in the co-op format.

The Co-op Philosophy
Co-operative education is an educational process in which academic study terms are alternated with work terms in the public and private sectors, giving students practical on-the-job experience in the area of their choice while continuing their studies towards a degree.
Essentially, it is a system that integrates the interests of employer organizations, educators and students. Although the potential rewards from completion of an academic programme in the co-op format are great, students should keep in mind that this format is extremely demanding with its alternating academic and work terms.

Admission to Co-op
General criteria for admission to the co-op format are given below. However, it should be noted that, in the Faculty of Arts and Science, only Honours and Specialization programmes are offered in that format by the specified department.
Applicants legally eligible to work in the public and private sectors who wish to undertake their studies in the co-op format should so indicate by filling in the appropriate box on the University Admissions Form. Such applicants may be asked to submit a resumé of past work experience and a statement of the reasons for their interest in the co-op format. Students accepted to the programme will be assigned a co-op adviser from within their academic department.

Co-op Fee
Students should note that a co-op fee was instituted by the Board of Governors in December 1985 to cover in part the administrative costs particular to the co-op programme. This fee is currently one hundred and fifty dollars ($150.00) per term and is charged for the second to penultimate terms inclusive. Students requiring less than the normal number of terms to complete their programmes in the co-op format are subject to the same total fee as those requiring the normal number of terms.
Co-op fees are due one month before the first day of eligible terms and are not refundable after the first day of the third month of the term, i.e., March 1, July 1 and November 1.

Co-op Performance Requirements
Students permitted to undertake their studies in the co-op format enrol as regular undergraduates in their programme and are subject to its academic regulations. However, higher performance standards are often required to continue in the co-op format.
Students undertaking the co-op format in a programme offered by the Faculty of Arts and Science are normally required to maintain a GPA of 2.5, and normally with no grade lower than a "D" in any course, elective or required. Students registered in Honours programmes must meet the Faculty Honours programme academic requirements.
Performance requirements for co-op students registered in a programme offered by the Faculty of Engineering and Computer Science are given in §71.10.8.

The evaluation of each of the four required work terms will be based on the submission of a work-term report by the student and the evaluation of the student's performance by the employer. The student must successfully complete both components to pass the work term which is marked on a pass/fail basis. The work-term reports are not considered for degree credits and are normally graded by at least two faculty members unless the report is considered confidential by the employer. In such cases the employer is responsible for the grading.
Failure to meet the co-op academic requirements or failure to complete a work term will normally result in the withdrawal of the student from the Institute for Co-operative Education.

Work Term
Co-operative education at Concordia is not to be construed as a placement operation or an inexpensive labour apprenticeship. The work term is an essential part of the student's learning experience and there is to be equitable remuneration paid for work performed. The University is responsible for negotiating work terms with employers who provide job descriptions to the Institute for Co-operative Education. The procedures for matching students to employers are managed by the Institute. Students must be willing to work anywhere in Canada, and may go abroad for a work term. A Co-op Co-ordinator visits the students at their place of work to evaluate the work performance, gauge the learning opportunities, assess the compatibility of student and employer and, if necessary, take corrective action. It should be noted that the University does not guarantee every student a job.

Advantages of a Co-op Education
Training in theory and practice in a structured and purposeful manner allows the student to come to terms with the realities of professional practice in a way that allows for the development of self-confidence, self-reliance and self-motivation. From the work terms, students learn to accept responsibility and the importance of deadlines. Realistic career expectations may be more easily formed. In the Institute, besides technical knowledge and practical experience, students gain skills in interpersonal relations through participation in seminars, workshops, talks and social activities.
Employers benefit as well. The employer who agrees to co-operate with the Institute benefits from the opportunity to evaluate prospective personnel without making permanent employment commitments and from the availability of students on a year-round basis. In recruiting permanent employees, they have available to them trained graduates who can be slotted into an operation without a training period. These advantages are seen as rewards in terms of lower turnover in trained personnel as the co-op graduates know their goals. Hence the economic return is one of much lower recruiting costs for experienced staff. The collaboration between employers and faculty provides an opportunity for employers to contribute to the educational process and to gain clearer insights into the University's resources.

UNDERGRADUATE PROGRAMMES

Co-op programmes offered in the **Faculty of Arts and Science:**

Chemistry and Biochemistry Co-op
Director: Dr. Raymond H. Zienius, (514) 848-3352

The Chemistry and Biochemistry co-operative programme is offered to students who are enrolled in the BSc Honours or Specialization in Chemistry, Specialization in Biochemistry, Specialization in Analytical Chemistry or Specialization in Synthetic Materials.
Students in Chemistry and Biochemistry co-op take the regular academic programme; however, in the work terms the employment opportunities range among a wide variety of industrial and government agencies located throughout Canada. Students are encouraged to choose their work-term positions in a way which provides them with experience ranging from basic analysis in industrial processes and environmental control to senior research placements in the laboratories of various employers. For specific details concerning the curriculum please see §31.050.

Economics Co-op
Director: Dr. John W. O'Brien, (514) 848-3908

The Economics co-operative programme enables students to complete a BA Honours or Specialization in Economics. The academic content of the Economics co-op programmes is identical to the regular programme; however, the required work terms provide the co-op student with the unique opportunity of experiencing economics in an applied format. Because of the course choices available, an Economics co-op student is prepared to undertake employment during his or her work terms in a variety of public sectors including Provincial and Federal Government agencies. Private sector positions might include placements in banks, consulting firms, or planning departments in a variety of industries. For specific details concerning the curriculum please see §31.080.

Exercise Science Co-op
Director: Dr. Edmund F. Enos, (514) 848-4824

The Exercise Science co-operative programme is offered to students who are enrolled in the Community Fitness Science Option of the Specialization programme.
The academic content of the Exercise Science co-op programme is identical to the regular programme with the exception of the six credit practicum requirement. Students will select an additional six credits from a list of possible choices.

The required work terms provide Exercise Science co-op students with the opportunity to work in a variety of fitness-oriented experiences including such areas as private and commercially operated fitness classes and health spas, corporate fitness and lifestyle programmes, municipal recreation programmes, YM-YWCA and senior citizen agencies. For specific details concerning the curriculum please see §31.120.

Mathematics and Statistics Co-op
Director: Dr. Morton M. Belinsky, (514) 848-3228

The Mathematics and Statistics co-operative programme allows students to complete the BA or BSc degrees with Honours or Specialization in Mathematics, Applied Mathematics, Statistics or Actuarial Mathematics. The academic content of the Mathematics and Statistics co-op programmes is identical to the regular programmes.
Work terms provide co-op students with the opportunity to gain practical experience with a variety of employers, such as insurance companies, consulting firms, large Canadian corporations, government departments, and research establishments. For specific details concerning the curriculum please see §31.200.

Physics Co-op
Director: Dr. Nelson W. Eddy, (514) 848-3274

The Physics co-operative programme is available to students in the BSc Honours and Specialization in Physics. The academic content is very similar to the regular programmes, with some specific recommendations for courses to improve the student's job skills. While it is hoped that most of the positions will be in the Montréal area, students must be prepared to work in other parts of Canada. For specific details concerning the curriculum please see §31.230.

Co-op programmes offered in the **Faculty of Engineering and Computer Science:**

Building Engineering Co-op
Director: Prof. Cedric Marsh, (514) 848-3196

The Building Engineering programme is offered in the co-op format to selected students pursuing undergraduate studies leading to the degree of BEng (Building). Please refer to §71.10.8 and 71.30 for specific information on programme and performance requirements.

Computer Science Co-op
Director: Prof. Graham Martin, (514) 848-3045

All options in the Computer Science programme are offered in the co-op format to selected students enrolled in the BCompSc programme. Please refer to §71.10.7 and 71.80 for specific information on programme and performance requirements.

CO-OP SCHEDULE

Activity **flow-chart** for students undertaking their programmes in the co-op format.

YEAR	FALL Sept.-Dec.	WINTER Jan.-April	SUMMER May-Aug.
1	1st Campus Term	2nd Campus Term	**Work Term I**
2	3rd Campus Term	**Work Term II**	4th Campus Term
3	**Work Term III**	5th Campus Term	**Work Term IV**
4	6th Campus Term	7th Campus Term*	

**The 7th Campus Term applies to the BEng programme only.*

NOTE 1: The above activity flow-chart is for students admitted into the co-op format in the Fall term of the first year of their academic programme. However, students may be admitted at the start of its Winter term, following their September entry, with special permission. All are required to register as full-time students, and they must plan their studies to give a reasonable division of the total credits required for their degree between the specified number of campus terms. Students eligible to apply for NSERC grants should note that they must take at least 15 credits per term to be considered.
NOTE 2: The Work Term negotiated with the employer is for a minimum of fourteen weeks. Extension beyond this period, to a maximum of seventeen weeks, is at the sole discretion of the employer. To complete the requirements of each work term, a student's work-term report must be assessed as "pass" in accordance with the procedure specified under "Co-op Performance Requirements".

Contacts at the Institute

Prof. Muriel Armstrong, *Acting Principal*
(514) 848-3951

Mr. John Fiset, *Assistant Principal*
(514) 848-3952

Ms. Karen Fiddler, *Assistant to the Principal*
(514) 848-3954

Co-ordinators:

Ms. Maria Paradiso
Math Co-op
(514) 848-3229

Ms. Katherine Belrose-Zayadi
Building Engineering and Computer Science Co-ops
(514) 848-3204

Ms. Karen Fiddler, *Acting Co-ordinator*
Economics Co-op
(514) 848-3920

Co-op Programme Administrator/Secretary:

Ms. Lynn Bergeron
(514) 848-3975

SECTION 24

CONVOCATION MEDALS AND PRIZES

24.1 GOVERNOR GENERAL'S AWARD

24.2 UNIVERSITY AWARDS

24.3 FACULTY AWARDS

24.3.1 Faculty of Arts and Science
24.3.2 Faculty of Commerce and Administration
24.3.3 Faculty of Engineering and Computer Science
24.3.4 Faculty of Fine Arts

24.4 SPECIAL AWARDS

24 Convocation Medals and Prizes

24.1 Governor General's Award

The Governor General's Medal: Presented by her Excellency, the Governor General of Canada, and awarded to the highest ranking student graduating from Concordia University.

24.2 University Awards

The Birks Medal: Presented by Henry Birks & Sons (Montreal) Ltd., and awarded to the highest ranking student graduating with the degree of Bachelor of Arts.

The Mappin Medal: Presented by Mappin's Ltd., and awarded to the highest ranking student graduating with the degree of Bachelor of Science.

The Frosst Medal: Presented by Charles E. Frosst & Co., and awarded to the highest ranking student graduating with the degree of Bachelor of Commerce.

The Administration Medal: Presented by Y.W. Kan in memory of P. Grogan, s.j., and awarded to the highest ranking student graduating with the degree of Bachelor of Administration.

The Chait Medal: Awarded to the highest ranking student graduating with the degree of Bachelor of Engineering.

The Alfred Pinsky Medal: Awarded to the most outstanding student graduating with the degree of Bachelor of Fine Arts.

The Computer Science Medal: Awarded to the highest ranking student graduating with the degree of Bachelor of Computer Science.

The Anne Stokes Medal: Awarded to the highest ranking student graduating with the degree of Bachelor of Education in Teaching of English as a Second Language.

24.3 Faculty Awards

The prizes listed in this section are awarded to the most outstanding graduating student in a Department (or Unit). Candidates are nominated by the Departments or Units for consideration and approved by the appropriate Faculty Council and Senate. The Departments or Units in making their selection may include, in addition to a high grade point average, other criteria such as number and/or level of the courses taken, outstanding results on a project or essay, or a significant contribution to the extra-curricular life of the department.

24.3.1 FACULTY OF ARTS AND SCIENCE

The Robert C. Rae Book Prize in Applied Social Science
The Canadian Pacific Forest Products Limited Prize for Biology
The Celanese Canada Ltd. Prize for Chemistry
The Classics Book Prize
The John E. O'Brien, S.J. Medal for Communication Studies
The Sun Life Prize in Economics
The Education Book Prize
The Celanese Canada Ltd. Prize for English
The Exercise Science Plaque
The French Book Prize
The Bogdan Zaborski Medal in Geography
The André Deland Medal for Geology
The Martin Lewis Memorial Book Prize in History
The Interdisciplinary Studies Medal
The Gordon Fisher Prize for Journalism
The Leisure Studies Medal
The Liberal Arts College Prize
The Library Studies Plaque
The Lonergan University College Prize
The Eric O'Connor Mathematics Medal

The Modern Languages and Linguistics Plaque
The W.R. Fraser Medal for Philosophy
The Walter Raudorf Medal for Physics
The Renee Vautelet Prize for Political Science
The J.W. Bridges Medal for Psychology
The Boyd Sinyard Prize for Religion
The School of Community and Public Affairs Prize
The Science College Prize
The Everett C. Hughes Medal for Sociology and Anthropology
The Theological Studies Medal
The Thérèse F. Casgrain Medal for Women's Studies

24.3.2 FACULTY OF COMMERCE AND ADMINISTRATION

The Ross Medal for Accountancy
The Decision Sciences and Management Information Systems Medal
The Finance Medal
The Management Medal
The Marketing Medal

24.3.3 FACULTY OF ENGINEERING AND COMPUTER SCIENCE

The Building Engineering Medal
The Civil Engineering Medal
The Computer Engineering Medal
The Electrical Engineering Medal
The Mechanical Engineering Medal

24.3.4 FACULTY OF FINE ARTS

The Art Education Prize
The Art History Prize
The Cinema Prize
The Contemporary Dance Prize
The Design Art Prize
The Music Prize
The Painting and Drawing Prize
The Photography Prize
The Printmaking Prize
The Sculpture, Ceramics and Fibres Prize
The Theatre Prize

24.4 Special Awards (Awards are made only when merited)

The Concordia Medal: Presented by the Alumni Association to a graduating student who has displayed distinctive leadership ability through both academic and non-academic achievements and has won the outstanding commendation of his/her fellows and of the Faculty.

The First Graduating Class Award: Presented on behalf of the first graduating class of the Faculty of Arts, Science and Commerce of Sir George Williams College, known as the Guinea Pig Club, for the most innovative and new contribution either academic or extra-curricular to university life.

The Malone Medal: Presented in honour of Rev. Patrick G. Malone, s.j., and awarded to the graduating student who has made the most outstanding contribution to the *internal* university community through commitment (a) to improve the quality of student life *OR* (b) to pursue a cause and achieve a goal which brings distinction to the University.

The O'Brien Medal: Presented in honour of Dr. J.W. O'Brien and awarded to the graduating student whose efforts and dedication best exemplify the values of the university within the larger *external* community.

SECTION 31

FACULTY OF ARTS AND SCIENCE

31.001 ARTS AND SCIENCE
31.002 PROGRAMMES AND ADMISSIONS REQUIREMENTS
31.003 DEGREE REQUIREMENTS
31.004 JOINT PROGRAMMES
ADULT EDUCATION (See 31.090.1)
ANDRAGOGY (See Adult Education)
31.010 APPLIED SOCIAL SCIENCE
31.030 BIOLOGY
31.040 CANADIAN STUDIES
31.050 CHEMISTRY AND BIOCHEMISTRY
31.060 CLASSICS
31.070 COMMUNICATION STUDIES
31.080 ECONOMICS
31.090 EDUCATION
31.100 ENGLISH
ENGLISH AS A SECOND LANGUAGE (See 31.320)
31.110 ÉTUDES FRANÇAISES
31.120 EXERCISE SCIENCE
31.130 GEOGRAPHY
31.140 GEOLOGY
31.160 HISTORY
31.170 INTERDISCIPLINARY STUDIES
31.180 JOURNALISM
31.185 LEISURE STUDIES
31.190 LIBRARY STUDIES
31.200 MATHEMATICS AND STATISTICS
31.210 MODERN LANGUAGES AND LINGUISTICS
31.220 PHILOSOPHY
31.230 PHYSICS
31.240 POLITICAL SCIENCE
31.250 PSYCHOLOGY
31.270 RELIGION
31.280 RUSSIAN STUDIES
31.290 SCIENCE/MATHEMATICS FOR TEACHERS
31.300 SCIENCE AND HUMAN AFFAIRS
31.310 SOCIOLOGY AND ANTHROPOLOGY
31.320 TEACHING OF ENGLISH AS A SECOND LANGUAGE
31.330 THEOLOGICAL STUDIES
31.340 URBAN STUDIES
WOMEN'S STUDIES (See 31.560)
31.400 COMPUTER SCIENCE
31.500 COLLEGES, INSTITUTES, SCHOOLS, AND CENTRES
31.515 INSTITUTE FOR CO-OPERATIVE EDUCATION
31.520 LIBERAL ARTS COLLEGE
31.530 LONERGAN UNIVERSITY COLLEGE
31.540 SCHOOL OF COMMUNITY AND PUBLIC AFFAIRS
31.550 SCIENCE COLLEGE
31.560 SIMONE DE BEAUVOIR INSTITUTE, and WOMEN'S STUDIES

31.001 Faculty of Arts and Science

Dean
CHARLES L. BERTRAND

Vice-Dean, Research, Space and Technical Services
PAUL J. ALBERT

Vice-Dean, Curriculum and International Cooperation
FLORENCE STEVENS

Vice-Dean, Student Affairs
SYLVIA RUBY

Vice-Dean, Academic Planning
CHARLES WHITE

STRUCTURE

The Faculty of Arts and Science, comprised of the former Loyola Faculty of Arts and Science, the former Sir George Williams Faculty of Arts and the former Sir George Williams Faculty of Science, was brought into being on 1 July 1977. For administrative purposes, the Faculty consists of departments, and programmes, centres, colleges, institutes and schools.

The departments and other units of which the Faculty is comprised are as follows:

Departments
Applied Social Science
Biology
Chemistry and Biochemistry
Classics
Communication Studies
Economics
Education
English
Études françaises
Exercise Science
Geography
Geology
History
Journalism
Leisure Studies
Library Studies
Mathematics and Statistics
Modern Languages and Linguistics
Philosophy
Physics
Political Science
Psychology
Religion
Sociology and Anthropology
Teaching of English as a Second Language
Theological Studies

Colleges
Liberal Arts College
Lonergan University College
School of Community and Public Affairs
Science College
Simone de Beauvoir Institute

Programmes
Canadian Studies
Individually Structured Programme
Russian Studies
Science and Human Affairs
Urban Studies
Women's Studies

PRINCIPLES OF EDUCATION

The Faculty of Arts and Science is studying the programmes of instruction that it offers, and where appropriate is modifying them, with the objective of ensuring that all embody certain principles of education. These principles, seven in number, were deliberately enunciated by the Faculty in the academic year 1980-81 as follows:

1. The Faculty endorses the concept of specialization in university education and does so in the conviction that specialized and intensive knowledge in a particular discipline or field is necessary to the development of an educated person. While the programmes that this Faculty offers are many and various, and the capacities that they form are as different one from another as the students who pursue them, they should all help prepare graduates for living as informed individuals, fulfilling their role in society, not merely in the period when society remains more or less as it was when they were engaged in formal study but also in unpredictable future time. The skills and confidence derived from the experience of being led by the spirit of inquiry and of knowing what knowledge is, are part of the contribution of university education to the maintenance of an essential sense of self.

2. That part of any degree programme which is devoted to specialized study must be structured in such a way that it gives a coherent view of the particular discipline or field. It should be concerned not only to teach appropriate skills and items of knowledge but also to show students, explicitly and implicitly, the nature of the subject, its methods of study and the sort of questions to which it addresses itself at its more advanced levels. The programme should be structured to achieve these goals economically and efficiently.

3. The component of specialized study should not constitute the whole of any programme of concentration. A programme should not consist of study in one discipline only but require a minimum of study in some other discipline or disciplines. The desired effect of this requirement is to create a context for specialized study in

which the strengths and also the limitations of the area of special study become more apparent.

4. The flexibility and mobility that many graduates require in the society they will enter derive in part from the skills and knowledge that they acquire in the university that go beyond the boundaries of their concentration programmes. Adaptability may be for many graduates a condition of success in their careers. The development of interests outside a single concentration can also enrich and sustain their personal lives. Hence, the total bachelor-degree programme should build upon and significantly extend the broad academic experience provided by the schools and colleges that students attend before entering university. In the context of our modern society this necessitates exposure to both the scientific method and humanistic approaches.

5. University education is concerned not only with the transmission of culture, but also with its extension, criticism and evaluation. All of these processes rely on mastery of communication. Ability to express oneself in writing (and in speech) should be fostered in all courses and degree programmes. Further, graduates will increasingly need to be familiar with, and to use, modern methods of communication. Programmes should develop an awareness of the impact of advances in communications and computer technology on the learning, work, and leisure environments.

6. Education must foster intellectual independence in a free and open spirit so that students may develop their critical faculties to their fullest. Degree programmes should never be so structured as to preclude the student's free choice of concentration and of options within their concentration or outside of it.

To assist students in making reasoned choices, the university should provide an advising structure which respects and accommodates decisions made by students about their programmes.

7. A degree programme need not realize all the *desiderata* implied in the foregoing; it must not, however, restrict itself to only one. A programme should have as objective the realization of a set of "local maxima", each corresponding to one of the principles, rather than the attainment of one "absolute maximum" corresponding to only one of the principles. For this reason, and because each programme has special constraints, compromise is inevitable. What matters is that some of the qualities of sound, contemporary education as articulated here be inherent in each programme, and that it be upon their inclusion that the absence of others be justified.

GENERAL STUDIES IN ARTS AND SCIENCE

Following the Principles of Education enunciated above, the Faculty of Arts and Science encourages all students to explore beyond the boundaries of their programmes of concentration. This is facilitated by the programme structure and graduation requirements of the Bachelor's degrees (see §31.002 and 31.003).

Bachelor's degrees normally require 90 credits of course work, consisting of at least one programme of concentration (Major, at 36 to 48 credits; Specialization, at 60 credits; or Honours at 60 or more credits). The balance of the degree requirements may be made up of one or more Minors (24 to 30 credits) or by courses selected from a broader spectrum of disciplines. Where programme structure permits, at least 24 credits are to be taken from outside the main area of concentration.

Most Major programmes are relatively short, allowing maximal development of interests outside the area of concentration. Two areas of concentration can be combined in a Double Major. Even longer programmes (Specialization and Honours) allow students to diversify their studies for up to one third of their degree requirements.

Programme structures thus permit students to obtain a judicious balance between concentrated study and exploration of broader interests. Department and Faculty advisers are available to help students develop a plan of study which accommodates their personal interests and satisfies degree requirements.

Programmes of concentration and related minors are published in the Calendar entries for each of the 26 disciplines in the Faculty (§31.010 onward). To facilitate innovative exploration outside these standard disciplines, the Faculty offers many alternatives. First, the University has established six Colleges (§31.500 onward) which foster various philosophies and methods of education on an intimate scale. Second, it has created Majors which cross disciplinary boundaries (Science and Human Affairs, Urban Studies, and Women's Studies). In addition, selected students may create their own Individually Structured Programme (§31.170), under the direction of the Faculty Adviser.

Finally, the Faculty offers cross-disciplinary minors (for example, Science and Human Affairs, Urban Studies, and Women's Studies) and a number of Interdisciplinary courses (§31.170) which may be chosen as electives in any programme.

A good general education — balancing the development of expert knowledge in a narrow domain with broader academic experience — can be obtained in the Faculty of Arts and Science. The programmes outlined are best considered as models of what can be planned by imaginative students and their academic advisers.

MATURE STUDENT ENTRY

Concordia University has a tradition of concern for the education of mature students; it has always sought to assist students of 21 and over to undertake undergraduate studies.

The primary aim of the Centre for Mature Students is to develop services to students returning to formal studies after an absence of many years. It is difficult to plunge suddenly into a very large urban university after years away from classes and studying; therefore, the Fellows and Staff of the Centre hope to reach out to all Mature-Entry students to offer them encouragement and guidance. The Centre has quarters on both campuses, that function as a "home base" for students who want counselling or are simply in need of some social contact with their peers. Newly equipped lounge facilities are provided in which students may meet. (Please see §14.)

31.002 Programmes and Admission Requirements

General admission requirements are listed in §13.

1. Specific requirements for admission to the various programmes leading to the degrees of Bachelor of Arts, Bachelor of Education, and Bachelor of Science, and to certificates, are set out in the first column of the following listings. They refer to the table of CEGEP pre-Arts and pre-Science profiles defined below. Students lacking one or more of these prerequisites may be admitted, but must include the designated prerequisites among the courses followed prior to entry into the second year of their undergraduate programme. In certain cases, the prerequisites must be taken in addition to the undergraduate programme.

Profile	Requirements
0.00	Diploma of Collegial Studies
.72	DEC or equivalent and appropriate teaching licence.
1.4	Mathematics 103, 203 Physics 101, 201, 301; or 102, 202, 302 Chemistry 101, 201 Biology 301 or 921
10.1	Mathematics 337; or 103, 307 Biology 301, 401; or 921 Psychology 102
10.2	Mathematics 103, 307
10.3	Mathematics 337
10.5	To have reached in the language that will be studied a level equivalent to that of 2 CEGEP courses. If these courses have not been available in the CEGEP attended, the University may make up for them.
10.9	Mathematics 103, 203 Physics 101, 201, 301-78 Chemistry 101, 201 Biology 301
10.10	Mathematics 103, 203, 105 Physics 101, 201, 301-78 Chemistry 101, 201 Biology 301
10.12	Mathematics 103, 105, 203
10.13	There are no particular requirements for graduates of an anglophone CEGEP other than the DEC (diplôme d'études collégiales). Graduates of a francophone CEGEP must hold a DEC with a course in English of the 900 series or have an equivalent background in English.
10.14	There are no particular requirements for graduates of a francophone CEGEP other than the DEC (diplôme d'études collégiales). Graduates of an anglophone CEGEP must hold a DEC with a course in French of the 900 series or have an equivalent background in French.
10.15	Candidates of a francophone CEGEP must hold a DEC with a course in English of the 900 series or have an equivalent background in English. Candidates of an anglophone CEGEP must hold a DEC with a course in French of the 900 series or have an equivalent background in French.
A:	Interview
C:	Knowledge of English
D:	Knowledge of French
G:	Letter of intent
K:	Submission of a portfolio of representative work
N:	Placement test
P:	Competency in written and oral French, to be determined by a proficiency test, the results of which may lead to the rejection of the candidate or the requirement of additional university courses.
Q:	Competency in written and oral English, to be determined by a proficiency test, the results of which may lead to the rejection of the candidate or the requirement of additional university courses.

Programme titles refer to honours, specializations, majors, and minor components where these exist. Full information about the programmes offered under each title (including combinations with programmes in other disciplines) is to be found in the section of the calendar specified in the third column below.

BACHELOR OF ARTS, BACHELOR OF SCIENCE, BACHELOR OF EDUCATION

Profile	Programme	Calendar Section
0.00	Adult Education	31.090
	Animal Biology (see Biology)	
0.00	Anthropology	31.310
0.00	Anthropology and Sociology	31.310
	Applied Mathematics (see Mathematics)	
0.00G	Applied Social Science	31.010
10.9	Biochemistry	31.050
10.9	Biochemistry (with Medicinal Chemistry Component)	31.050
10.9	Biology	31.030
	Botany (see Biology)	

Profile	Programme	Calendar Section
0.00A,G,K.Q	Broadcast Journalism	31.070, 31.180
0.00	Canadian Studies	31.040
	Cell and Molecular Biology (see Biology)	
10.9	Chemistry	31.050
10.9	Chemistry (Analytical)	31.050
10.10	Chemistry (Certificate in Scientific Measurement — Chemistry and Physics options)	
0.00	Child Studies	31.090
	Classical Philology, Latin and Ancient Greek (see Classics)	
0.00	Classics	31.060
0.00A,G,K	Communication Studies	31.070
0.00A,G,K,Q	Communication and Journalism	31.070, 31.180
0.00A	Community Service	31.150
0.00K	Creative Writing (see English, Creative Writing)	31.100
0.00A	Early Childhood Education	31.090
	Ecology (see Biology)	
0.00	Economics	31.080
0.00	Education	31.090
0.00	Education: Adult Education	31.090
	Education (see Child Studies; Early Childhood Education; Teaching of English as a Second Language)	
0.00	Education and Philosophy	31.090, 31.220
0.00	English	31.100
0.00K	English: Creative Writing	31.100
0.00	English: Dramatic Literature	31.100
0.00A,K	English: Playwrighting	31.100
0.00	English and French	31.100, 31.110
0.00	English and History	31.100, 31.160
0.00	English Language	31.100
0.00	English Literature	31.100
10.5	English and Modern Languages	31.100, 31.210
0.00	English and Philosophy	31.100, 31.220
0.00	English and Religion	31.100, 31.270
10.9	Exercise Science	31.120
10.9	Exercise Science (Athletic Therapy Option, Adapted Physical Activity Option, Pre-Research Option, Community Fitness Science Option)	31.120
0.00A	Family Life Education	31.010
	French Studies/Études françaises	
10.14A	Enseignement du français langue seconde aux adultes	31.100
0.00	Langue française	31.110
10.14	Littérature de langue française	31.100
10.14 & 10.15	Littérature française et anglaise	31.110
10.13P,Q or 10.15P,Q	Traduction	31.100
	Études françaises	
10.14	Enseignement du français	31.100
0.00	Études francophones	31.100
0.00	Langue	31.100
10.14	Littérature	31.100
10.15	Traduction	31.100
0.00	Geography (BA) — all options	31.130
10.9	Geography (BSc) — all options	31.130
0.00	Geography (BA), Human (includes Cultural, Economic, Historical, Urban)	31.130
0.00	Geography (BA), Human Environment Relationships	31.130
0.00	Geography (BA), Physical	31.130
10.9	Geography (BSc), Environmental, Hydrology	31.130
10.9	Geography/Geology (BSc), Resource Analysis and Land Use	31.130, 31.140
10.9	Geology	31.140
10.9	Geology/Physics	31.140
10.9	Geology/Chemistry	31.140
10.9	Geology/Ecology	31.140
10.9	Geology/Geography (BSc), Resource Analysis and Land Use	31.130, 31.140
10.5	German	31.210
	Greek (Ancient — see Classics)	
0.00	History	31.160
0.00	History (Certificate in the History of Québec)	31.160

Profile	Programme	Calendar Section
0.00	History and English	31.160, 31.100
0.00	History and French	31.160, 31.110
0.00	History and Philosophy	31.160, 31.220
	History and Religion (see Religion and History)	
Appropriate	Interdisciplinary Studies — Self-Elected Specialization	31.170
10.5	Italian	31.210
0.00A,G,Q	Journalism	31.180
0.00	Judaic Studies	31.270
	Latin (see Classics)	
10.1	Leisure Studies	31.185
0.00	Library Studies	31.190
0.00	Linguistics	31.210
10.12	Mathematics (BA)	31.200
10.10	Mathematics (BSc)	31.200
10.12	Mathematics (Actuarial — BA)	31.200
10.10	Mathematics (Actuarial — BSc)	31.200
10.12	Mathematics (Applied — BA)	31.200
10.10	Mathematics (Applied — BSc)	31.200
0.00	Mathematics (Minor for Arts Students)	31.200
0.00	Outdoor Education	31.120
0.00	Philosophy	31.220
0.00	Philosophy and Education	31.220, 31.090
0.00	Philosophy and English	31.220, 31.100
0.00	Philosophy and History	31.220, 31.160
0.00	Philosophy and Religion	31.220, 31.270
0.00	Philosophy and Sociology	31.220, 31.310
10.10	Physics	31.230
	Physics (Theoretical and Experimental options — see Physics)	
10.10	Physics (Certificate in Scientific Measurement — Chemistry and Physics Options)	31.230
10.10	Physics/Marketing	31.230
0.00	Political Philosophy	31.220
0.00	Political Science	31.240
10.1	Psychology (BA)	31.250
10.9	Psychology (BSc)	31.250
10.9	Psychology (Psychobiology Option)	31.250
0.00	Religion	31.270
	Religion — Judaic Studies (see Judaic Studies)	
0.00	Religion and English	31.270, 31.100
0.00	Religion and History	31.270, 31.160
0.00	Religion and Philosophy	31.270, 31.220
0.00	Religion and Sociology	31.270, 31.310
10.9	Resource Analysis and Land Use	31.140
0.00	Russian Studies	31.280
0.00	Science and Human Affairs	31.300
10.10	Scientific Measurement (Chemistry and Physics options)	31.230
Appropriate	Self-Elected Specialization Programme	31.170
0.00	Sociology	31.310
0.00	Sociology and Philosophy	31.310, 31.220
0.00	Sociology and Religion	31.210, 31.270
10.5	Spanish	31.210
10.12	Statistics (BA)	31.200
10.10	Statistics (BSc)	31.200
10.10	Synthetic Materials (see Chemistry)	31.050
10.13A,G,P,Q	Teaching of English as a Second Language (Elementary, Secondary, and Adult options)	31.320
0.00	Theological Studies	31.330
0.00	Urban Studies	31.340
0.00A	Western Society and Culture	31.520
0.00	Women's Studies	31.560

2. Mature entrants are advised to consult §14 of this calendar, and in particular 14.3.1.

3. Students admitted to BA and BEd Extended Credit Programmes are required to complete 120 credits for the degree (i.e., 30 additional credits) and must include the following 30 credits in the 120:

6 credits in English (language or Literature)
24 elective credits, of which a maximum of 12 may be outside the Faculty of Arts and

Science. Certain departments in the Faculty have specific requirements. Students intending to follow programmes of concentration within these departments must include the specified components as part of their programme.

BA Mathematics: 9 credits in Mathematics — 203^3, 204^3, 205^{3*}

**Students not having MATH 202^3, or the equivalent must take it in place of one of their elective courses.*

BA Psychology: 3 credits in Mathematics
3 credits in Biology
6 credits in Psychology

Students admitted to BSc Extended Credit Programmes are required to complete 120 credits for the BSc degree (i.e., 30 additional credits) and must include the following 30 credits in the 120:

6 credits in Chemistry 205^3, 206^3
6 credits in Mathematics 203^3, 205^{3*}
12 credits in Physics 204^3, 205^3, 206^3, 224^1, 225^1, 226^1
3 credits in Biology 201^3
3 credits in Mathematics 204^3 for students intending to enter programmes of concentration in Mathematics or Physics;** or electives for all other students

**Students not having MATH 201^3, or the equivalent, must take it in place of one of their elective courses.*

***Students not having MATH 202^3, or the equivalent, must take it in place of one of their elective courses.*

NOTE: Students in the BA, BEd or BSc Extended Credit Programme may not count towards their programmes of concentration courses taken as part of the first 30 credits.

31.003 Degree Requirements

Up to and including the academic year 1973-74, degree programmes were expressed in terms of courses, with one credit being applied to a "full course" (normally, one extending over two terms) and one half-credit being applied to a "half-course" (which was normally completed in one term).

In 1974-75, in accordance with the recommendations of the Council of Universities of Québec, the credit base was modified to take into account the total activity of the student. A student preparing for the degree of Bachelor of Arts, Bachelor of Education, or Bachelor of Science takes a minimum of 90 credits. Each credit represents, for the average student, a minimum of 45 hours spread across lectures, conferences, tutorials, laboratories, studio or practice periods, tests, examinations, and personal work.

Since the CEGEP programmes are designed to give all students the opportunity to explore different fields and thus acquire a broad general basis for further study, the undergraduate programmes in the Faculty of Arts and Science require of students some degree of concentration in specific areas. Detailed statements about these programmes are made under the appropriate disciplinary headings in the sections of the calendar that follow this general account of degree requirements. They represent four main forms of concentration: the *Minor,* the *Major,* the *Specialization,* and *Honours;* and a fifth form, the *Certificate.* The University's formal definitions of these kinds of programmes are set out in §16.2; for the convenience of students in Arts and Science, those definitions as they are construed in the Faculty are briefly repeated below.

The *Minor* is a programme consisting of a *minimum* of 24 credits in a single discipline and professing to give a basic introduction to the methodology and key concepts of that discipline. A Minor cannot in and by itself provide the concentration required of a candidate for a degree and is therefore always taken in combination with another programme.

The *Major* consists of a *minimum* of 36 credits taken in an approved sequence of courses.- Normally within a major programme not more than 36 credits are required from a single discipline or department. In certain programmes, however, additional credits are required in cognate disciplines and departments. The major provides a solid grounding in the academic knowledge comprehended within the field of concentration. To enter and remain in it, a student normally does not have to meet a special performance requirement; see, however, programmes in Leisure Studies §31.185, Library Studies §31.190 and Western Society and Culture §31.520.

The *Specialization* consists of a *minimum* of 60 credits, normally not more than 54 credits of which are mandated from a single discipline or department. Like an honours programme, it provides a comprehensive education in the field of concentration, but to enter and remain in it, a student normally does not have to meet a special performance requirement (see, however, programmes in Early Childhood Education §31.090, French/English Translation §31.110, Interdisciplinary Studies: Individually Structured Programme §31.170, Leisure Studies §31.185. Students interested in subsequent "classification" by the Provincial government may be advised to follow a Specialization or an Honours programme.

The *Honours* programme consists of a *minimum* of 60 credits taken in an approved sequence of courses. Normally within an honours programme not more than 60 credits are mandated from a single discipline or department. Additional credits may be required in cognate disciplines and departments. Superior academic performance is required for admission to and continuation in the honours programme, the precise level of such performance being determined by Senate. See §16.2.4 and *Faculty Honours Regulations* set out below for matters governing Honours programmes at Concordia. An Honours degree or equivalent, because it testifies to a student's comprehensive education in a particular field, intellectual commitment to that field, and achievement of a high level of academic performance, has traditionally been required of entrants to postgraduate programmes.

Graduation Requirements

1. A candidate for graduation must have successfully completed a programme of concentration in the form of an *Honours, Specialization* or *Major* programme.

2. A candidate for graduation must have successfully completed at least 24 credits outside the single discipline or department from which the degree concentration has been chosen. Within every block of 30 credits taken towards the degree, a student will normally choose no more than 24 credits from any one discipline or department.

3. A candidate for graduation must have successfully completed at least 18 credits from courses in Arts and Science in every block of 30 credits taken towards the degree.

4. A candidate for the degree of Bachelor of Arts must have qualified for admission to, and successfully completed, a programme leading to that degree. Specific admission requirements, expressed as CEGEP pre-Arts profiles, are given in §31.002. Students wishing to transfer out of one degree programme into another must satisfy the admission requirements of the programme they seek to enter.

5. Students enrolled in a 90-credit degree or an extended credit degree programme in the Faculty of Arts and Science may take ESL courses for degree credit, up to a maximum of six credits.

6. A candidate for the degree of Bachelor of Science must have qualified for admission to, and successfully completed, a programme leading to that degree. Specific admission requirements, expressed as CEGEP pre-Science profiles, are given in §31.002. Students wishing to transfer out of one degree programme into another must satisfy the admission requirements of the programme they seek to enter.

7. A candidate for the degree of Bachelor of Education must have qualified for admission to, and successfully completed, the programme leading to that degree. The admission and degree requirements are set out in §31.320.

8. In general, the credits obtained for any course may not be used to satisfy the requirements of more than one programme. Students first registered in certain Certificate programmes may however apply credits obtained towards the Certificate to a degree programme.

9. Those students entering the University after September 1, 1978 as *Independent students* will be permitted to apply *no more* than 30 credits obtained as an Independent student towards any Arts and Science Faculty degree programme.

Supplemental Examinations

(Arts and Science)

Supplemental examinations shall be offered only where, as a condition for passing the course, it is required that a student pass the final examination regardless of its weighting; or where the final examination contributes 50% or more of the final grade.

A student failing a course which comprises entirely, or in part, a laboratory or similar practicum, may not be eligible to write a supplemental examination.

All courses which a student fails and for which there is no supplemental examination shall be graded FNS or R.

A failed student (see §16.3.5) may not write supplemental examinations.

Honours Programmes

The Faculty of Arts and Science has programmes leading to an Honours degree in certain selected fields. To enter an Honours programme, students apply to the Departmental Honours Committee (Adviser). The Departmental Honours Committee (Adviser) will accept students into Honours, subject to review by the Faculty Honours Committee. The Departmental Honours Committee (Adviser) will not normally accept students until they have obtained 30 credits at this University; students requiring fewer than 30 credits to graduate will not normally be accepted. The department will notify the Faculty Honours Committee of the acceptance. The Faculty Honours Committee will review the departmental acceptance and notify the department, the student, and the Records Office of the acceptance. In those cases where the Faculty Committee reverses a department's acceptance of a student into Honours, the department may appeal the Faculty Committee's ruling to the Arts and Science Faculty Council.

Honours Regulations (Faculty Regulations)
See also §16.2.4

In order to qualify for an Honours degree, a student must comply with the regulations set forth below.

1. An Honours student must meet the general degree requirements, as well as the specific requirements for an Honours degree. A student must complete a minimum of 30 credits in the courses from the Honours component of the programme at this University to receive a degree with Honours. In certain cases, these 30 credits may include some specific courses for which pro-tanto credit may not be awarded.

2. An Honours student must maintain an average of "B" in all courses in the Honours component of the programme; the minimum acceptable grade in any one of these courses is "C".

3. An Honours student must have a minimum average of "B-" over courses in the Honours component of the programme taken in each academic year. For part-time students, this will be calculated in eighteen-credit blocks.

4. In the courses outside the Honours component of the degree programme, an Honours student must have an average of no less than "C"; the minimum acceptable grade in these courses is "D".

5. Students who are required to withdraw from the Honours programme may proceed in the corresponding Specialization or Major programme. Reinstatement in the Honours programme is possible only by appeal to the Faculty Honours Committee.

6. A student is allowed to qualify for only one Honours degree in either a single or combined Honours programme. A student may qualify for a Minor or Major programme in addition to an Honours programme. In general, the credits obtained for a particular course may be used to satisfy the requirements of only one programme. Students may appeal their department's determination of their status or interpretation of

requirements in the Honours programme. Such appeals should be addressed to the Chair of the Faculty Honours Committee.
The Faculty Honours Committee receives and reviews departmental recommendations for acceptance into Honours programmes and graduation with Honours, and adjudicates disputes between students and departments concerning Honours programmes. Since the Faculty Honours Committee cannot hear appeals contesting its own judgements, students and departments who wish to appeal a decision of the Faculty Honours Committee should address this appeal to the Chair of the Arts and Science Faculty Council.
These new regulations will apply to those students entering Honours programmes as of June 1, 1979. Students already in an Honours programme may continue under the old regulations established prior to June 1, 1979.

General Certificate in Arts and Science
The General Certificate in Arts and Science is intended primarily for part-time students who qualify for admission to bachelor degree programmes, but who, at the time of registration, have not yet determined which programme would best serve their interests. In particular, it is designed to meet the needs of mature students who are unwilling or unable to make the long-term commitment involved in a regular or extended degree programme. Students who have completed a university degree do not qualify for admission into the General Certificate in Arts and Science.
The Certificate requires successful completion of 30 credits. At least 24 of these credits must be chosen from courses offered by not more than three departments in the Faculty of Arts and Science.
Credits earned in the Certificate may not be counted towards the additional credits required in extended programmes.
Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.
The General Certificate Programme in Arts and Science was first offered in the session commencing September 1978. Students who are admitted to the General Certificate in Arts and Science, and who wish to continue in a degree programme should apply for admission to their programme within the first 30 credits.

31.003.1 ACADEMIC PERFORMANCE REGULATIONS

Objectives
The objectives of these regulations are to ensure that the Faculty can certify that all of its graduates have achieved an acceptable level of scholarship.

Annual Weighted Grade Point Average (WGPA)* Requirements and Consequences
**See §16.3.7 for definition of Annual WGPA.*

Acceptable Standing requires that a student obtain an Annual WGPA of at least 2.00.

NOTE: Although a C- grade (1.70 grade points) is designated as Satisfactory in §16.3.2, a WGPA of 2.00 is required for Acceptable Standing.
Students in Acceptable Standing may continue their programmes of study, following the advice of their academic departments.

Conditional Standing results when a student obtains an Annual WGPA of less than 2.00, but at least 1.50. A student is not permitted to obtain two consecutive Conditional Standing assessments.
Students in Conditional Standing may not write supplemental examinations nor complete work graded incomplete.
Students in Conditional Standing will not be permitted to register for further study until their programme has been approved by the appropriate adviser in their department.
They must obtain Acceptable Standing at the time of their next assessment.

Failed Standing results when a student obtains an Annual WGPA of less than 1.50, or Conditional Standing in two consecutive periods of assessment.
Failed students may not write supplemental examinations nor complete work graded incomplete.
Students who are in Failed Standing for a second time must withdraw from the University and may not apply for readmission.
Failed students who are not required to withdraw may apply for readmission through the Dean's Office. If readmitted, they will be placed on academic probation. They must return to Acceptable Standing at the time of their next assessment. Other conditions will be determined at the time of readmission.

Graduation Requirements
Students must satisfy all course requirements and be in Acceptable Standing.
The standings of potential graduates who have attempted less than twelve (12) credits since their last assessment are determined on the basis that these credits constitute an extension of the last assessment period.
Potential graduates who fail to meet the requirements of Acceptable Standing, but meet the requirements of Conditional Standing, will have the following options:
a) register for an additional twelve credits and, at the next assessment, meet the requirements for Acceptable Standing;
or
b) register for fewer than twelve additional credits. In this case, standing will be determined on the basis that these extra credits constitute an extension of the last assessment period.
For both option a) and option b), the additional courses taken must be approved by the appropriate member of the Dean's Office, in consultation with the student's department where necessary.

Dean's Office
Dean's Office is to be understood as being the appropriate member of the Dean's Office, normally the Vice-Dean, Student Affairs, or delegate.

31.004 Joint Programmes

Subject to approval of the departments concerned, students may take these or other specially designed programmes by being admitted to the Individually Structured Programme (see programme description and admission procedures in §31.170):

BA Joint Honours in Education and Philosophy
BA Joint Honours in English and History
BA Joint Honours in English and one of the Modern Languages
BA Joint Specialization in English and one of the Modern Languages
BA Joint Honours in English and Philosophy
BA Joint Honours in English and Religion
BA Joint Honours in French and History
BA Joint Honours in French and one of the Modern Languages
BA Joint Honours in History and Philosophy
BA Joint Honours in History and Religion
BA Joint Honours in Philosophy and Religion
BA Joint Honours in Philosophy and Sociology
BA Joint Honours in Religion and Sociology

Students wishing to have further information about these programmes should consult the departments concerned.

NOTE: The use of "C" in the course prefix is discontinued. Unless otherwise indicated, a course previously prefixed with a C is equivalent to the identically numbered one without the C prefix.

31.010 Applied Social Science

/91/92

Chair
RICHARD CAWLEY, *Associate Professor*

Professors
JAMES F. GAVIN
RICHARD D. McDONALD

Associate Professors
SYLVIA I. CARTER
RAYE KASS
MARILYN TAYLOR

Associate Professor of Applied Social Science and Psychology
DOROTHY MARKIEWICZ

Assistant Professor
BLUMA LITNER

Adjunct Assistant Professor
LIBBY LABELL

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Specialization in Applied Social Science

NOTE: PSYCH 200^6 is a prerequisite for the Psychology courses included in this programme. Students not exempted from PSYC 200^6 must enrol in this course during their first year.

The Sociology courses included in this programme also have prerequisites (e.g., SOCI 203^3 which should be taken in their first year).

9 APSS 240^6, 250^3
6 PSYC 310^3 and 315^3 taken concurrently
6 APSS 331^6
6 Chosen from APSS 420^6, 440^6, 450^6
6 APSS 490^6
27 Chosen from Lists A, B, C, and D. At least six (6) credits and not more than twelve (12) credits must be chosen from APSS courses. At least six (6) credits must be chosen from List A and a further six (6) credits from one other List: B, C, or D.

List A: Social Theory
PSYC 333^6, SOCI 300^6, 330^6, 370^6

List B: Understanding Individuals and Groups
APSS 313^6, 318^3, 356^3, 419^3, 450^6, 463^6; ADED 344^3, 345^3; PSYC 283^3, 284^3, 336^6, 379^3; SOCI 262^3, 263^3, 372^6

List C: Understanding Communities
APSS 361^6, 440^6; GEOG 313^6, 331^6; SOCI 280^6, 353^3, 354^3, 382^3; URBS 280^6

List D: Understanding Organizations
APSS 420^6; MANA 266^3, 340^3; PSYC 375^6; SOCI 329^3, 429^3

(91)

42 BA Major in Applied Social Science

NOTE: PSYC 200^6 is a prerequisite for the Psychology courses included in this programme. Students not exempted from PSYC 200^6 must enrol in this course during their first year.

The Sociology courses included in this programme also have prerequisites (e.g., SOCI 203^3) which should be taken in their first year.

9 APSS 240^6, 250^3
6 APSS 331^6
6 Chosen from APSS 420^6, 440^6, 450^6
3 APSS 415^3
18 Chosen from Lists A, B, C, and D. At least six (6) credits and not more than 12 credits must be chosen from APSS courses. At least six (6) credits must be chosen from List A and a further six (6) credits from one other List: B, C, or D.

List A: Social Theory
PSYC 333^6, SOCI 300^6, 330^6, 370^6

List B: Understanding Individuals and Groups
APSS 313^6, 318^3, 353^3, 356^3, 419^3, 450^6, 463^6; ADED 344^3, 345^3; PSYC 283^3, 284^3, 336^6, 379^3; SOCI 262^3, 263^3, 372^6

List C: Understanding Communities
APSS 361^6, 440^6; GEOG 313^6, 331^6; SOCI 280^6, 353^3, 354^3, 382^3; URBS 280^6

List D: Understanding Organizations
APSS 420^6; MANA 266^3, 340^3; PSYC 375^6; SOCI 329^3, 429^3

Certificate in Community Service

The Department of Applied Social Science offers a 30-credit programme consisting of 21 credits in the Department and 9 credits which complement these from other disciplines leading to the Concordia University Certificate in Community Service. Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Admission Requirements
General Admission Requirements are listed in §13.

Students are required to complete the 0.00A entrance profile to enter the Certificate.
Students should be actively involved in community service, either as staff or as volunteers or members of boards, committees, or councils of community organizations and agencies.

30 Certificate in Community Service
NOTE: APSS 240[6], PSYC 200[6] and SOCI 203[3] are prerequisites for courses included in this Certificate.
(Courses must be taken in an approved sequence and selected in consultation with the Coordinator of the Certificate programme in accordance with the selected emphasis in addiction education, community intervention, gerontology or organizational leadership.)
Stage I
9 APSS 250[3], 361[6]
Stage II
9 Chosen in consultation with the Coordinator of the Certificate programme from outside APSS
6 APSS 331[6]
Stage III
6 Chosen from APSS 318[3], 419[3], 420[6], 440[6]
NOTE: In the event that a student is awarded an exemption from a required course, it will be necessary for the student to replace that course with another relevant to the programme, chosen in consultation with the Coordinator of the Certificate Programme.

Certificate in Family Life Education
The Department of Applied Social Science offers a 30-credit programme consisting of 18 credits of applied courses and 12 credits of foundation courses chosen as electives, leading to the Concordia University Certificate in Family Life Education. Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Admission Requirements
General Admission Requirements are listed in §13.
Students are required to complete the 0.00A entrance profile to enter the Certificate.
Students should be actively involved in family life education through a sponsoring community agency or organization; or interested in becoming more effective family life educators.

30 Certificate in Family Life Education
NOTE: APSS 240[6], PSYC 200[6] and SOCI 203[3] are prerequisites for courses included in this Certificate.
(Courses must be taken in an approved sequence and selected in consultation with the Coordinator of the Certificate programme)
Stage I
6 APSS 250[3], 354[3]
Stage II
12 Chosen from EDUC 398[3]; PSYC 280[3], 281[3], 283[3], 284[3], 298[3]; SOCI 262[3], 263[3], 272[6], 274[6], 372[6], 373[3], 398[3]; RELI 333[3], 334[3], 370[6]
Stage III
12 APSS 331[6], 353[3], 455[3]
NOTE: In the event that a student is awarded an exemption from a required course, it will be necessary for the student to replace that course with another relevant to the programme, chosen in consultation with the Coordinator of the Certificate programme.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

APSS 240 ***Interpersonal and Group Dynamics*** (6 credits)
This course is designed to foster development of understanding with respect to self, self in relation to others and patterns of relationships in small groups. This involves skill-building in: relating and communicating with others; observation and diagnosis of relationships and group dynamics; problem-solving; decision-making; and intervention. The course also includes learning and application of interpersonal communication and group development theory. The course requires active participation, reflective assignments such as journal writing, and learning how to use theory to interpret observation and experience.
NOTE: Students who have received credit for APSS 355 and 356 may not take this course for credit.

APSS 250 ***Applied Social Science Approaches to Social Problems*** (3 credits)
Prerequisite: Enrolment in APSS programmes. This course focuses on two questions: What is a social problem? What is a social response? The exploration of these questions is field-based, supported by cases, research of the literature, and reflection on the issues there discovered. Students are introduced to the concepts and processes of social systems and social intervention. Lectures and laboratories.
NOTE: Students who have received credit for APSS 212 may not take this course for credit.

APSS 298 ***Selected Topics in Applied Social Science*** (3 credits)

APSS 299 ***Selected Topics in Applied Social Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

APSS 313 ***Adolescent Behaviour in Urban Areas*** (6 credits)
Prerequisite: APSS 240; APSS 250. A survey of adolescent values, family and group relations, social mobility, friendship patterns, and educational and vocational adjustment, focusing on understanding social

behaviour in urban communities. Attention is also given to programmes attempting to enhance adolescent development and reduce social problems.
NOTE: Students who have received credit for APSS 413 may not take this course for credit.

APSS 318 ***Gerontology for the Practitioner I*** (3 credits)
Prerequisite: APSS 240. This course provides an overview of the status and problems of the elderly in our society. Through interviews, visits, readings, and lecture-discussions, the course is designed to foster an understanding of some of the problems confronting the elderly. Attention is given to the resources available for the elderly as well as to approaches to the problems of the elderly that maximize their sense of responsibility.
NOTE: Students who have received credit for APSS 418 may not take this course for credit.

APSS 331 ***Leadership in Group Development*** (6 credits)
Prerequisite: APSS 240; APSS 250. This course is designed to provide students with an opportunity to increase their effectiveness in leading small groups; to identify their leadership styles and to adapt individual styles to a variety of situations. The course focuses on: factors helping and hindering group process; communication patterns; problem solving; handling conflicts and dealing with personal needs of members. Special attention is given to tools for systematic observation, group diagnosis and group self-analysis techniques. Students are required to study the development of an outside group through the year. Lectures, laboratories and fieldwork.
NOTE: Students who have received credit for APSS 431 may not take this course for credit.

APSS 353 ***Sexuality and Human Relations*** (3 credits)
Prerequisite: APSS 240. Using a variety of small group processes, the seminar explores physical and psychosocial factors in the emergence of the sexual self. Objectives of the seminar include helping students to increase awareness of sexual values and attitudes. Lectures and laboratories.
NOTE: Students who have received credit for APSS 453 may not take this course for credit.
NOTE: Students will receive no more than 6 credits from APSS 353 and HEAL 472.

APSS 354 ***Special Seminar in Family Communication*** (3 credits)
Prerequisite: This course is for Certificate students only. Students must have completed APSS 240 to enter the Certificate programme. A course in marriage and family living, including decision making, interpersonal relationships, communication, male-female lifestyle and problem solving within a family. Handling of crisis, loneliness, death, and dying are also considered. The course studies marriage and family relationships in a way that can pertain directly to the student's own living experiences. Lectures and laboratories.
NOTE: Students who have received credit for APSS 454 may not take this course for credit.

APSS 356 ***Interviewing*** (3 credits)
Prerequisite: APSS 240; APSS 250. The course reviews different forms of interviewing, communication influences on the interviewer and interviewee, structure and design features of interviews, construction of questions, building rapport, controlling information flow, and limitations of the approach. Illustrations of interviewing are taken from the contexts of business, counselling, mass media, and research, among others. Approximately equal emphasis is devoted to theoretical discussions and practice.
NOTE: Students who have received credit for APSS 456 may not take this course for credit.

APSS 361 ***Human Services: Public Policy and Current Issues*** (6 credits)
A general course concerned with human services problems in modern society; some analysis of these problems in relation to economic and cultural patterns. A description of the functional settings in which human services are practised. A consideration of the methods used in human services, and some consideration of the links between human services and religion, law, medicine, nursing, teaching, and other professions.
NOTE: Students who have received credit for APSS 461 may not take this course for credit.

APSS 398 ***Selected Topics in Applied Social Science*** (3 credits)

APSS 399 ***Selected Topics in Applied Social Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

APSS 415 ***Personal Values and Social Problems*** (3 credits)
Prerequisite: Enrolment in the BA Major in Applied Social Science and completion of 60 credits in the degree programme. This course is designed as an integrative seminar for final-year students. It is intended to help students draw together their learning from a variety of disciplines and relate it to practical conditions of the social world. The course includes identification of personal strengths, interests, goals, and values related to social and community service.

APSS 419 ***Gerontology for the Practitioner II*** (3 credits)
Prerequisite: APSS 318. This course focuses in depth on one or two pivotal issues for the elderly in our society. In this course students interview the elderly, visit community resources for the elderly, and develop approaches to the solutions for the problems identified.

APSS 420 ***Organizational Change and Development*** (6 credits)
Prerequisite: APSS 240; APSS 250; APSS 331. This course focuses on the leader who solves problems

and makes decisions in conjunction with other people in community-serving organizations. The basic objective of this course is to increase knowledge and understanding of human behaviour in the not-for-profit organizations. The course focuses on: i) theory and research, ii) understanding of the processes of leadership and decision making, iii) behavioural skills in working with people, iv) understanding of oneself in relation to administrative responsibility. This course relies heavily on active participation of class members. This course has a fieldwork requirement.
NOTE: Students who have received credit for APSS 421 may not take this course for credit.

APSS 440 ***Community Development*** (6 credits)
Prerequisite: APSS 240; APSS 250; APSS 331. This course has students working as volunteers in a community agency engaged in outreach work or community development. Class sessions are designed for theoretical input on problems identified in students' field placement experience. Class sessions include theory presentations, games and simulations, and problem solving. The emphasis is on discovering what a social system is by observation and participation and finding out how to manage interventions in an appropriate fashion. Lectures and a fieldwork requirement.
NOTE: Students who have received credit for APSS 441 may not take this course for credit.

APSS 450 ***Principles and Practices of Counselling*** (6 credits)
Prerequisite: APSS 240. This course is designed to introduce students to the basic concepts of helping. Through theoretical and experiential approaches instruction focuses on basic concepts of relating to another person in a helping relationship and skill development in interviewing. Students are briefly introduced to various counselling theories and approaches to clarify their own theoretical position in a helping relationship. This course is not designed to equip students to become professional counsellors, but to introduce them to the field and prepare them for future study and training. The course includes skill training, observation and demonstration exercises, role play, practice and discussion sessions, theory input and the use of films and video. This course has a fieldwork requirement.

APSS 455 ***Advanced Integrative Seminar in Family Life Education*** (3 credits)
Prerequisite: This course is for Certificate students only who must be in the final year of the programme. The purpose of this course is to coordinate the other courses required by the programme and to integrate the theory derived from the contributing disciplines within an applied social science perspective. Lectures, laboratories and fieldwork.

APSS 463 ***Adulthood: Patterns and Transitions*** (6 credits)
Prerequisite: APSS 240; APSS 250; permission of the Department. The course addresses itself to the phenomenon of adult development from early adulthood through maturity. The focus is on both the content of the life changes observed, and on the process of change from one life stage or period to another. Participants explore the patterns of change in their own lives and relate these patterns to contemporary theories of adult development. The relationship of life changes to cultural and historical features of the times, and to working in social systems as helping professionals are also examined. Thus, autobiographical accounts of class participants, and existing research evidence describing normative life changes, reactions to these, and the nature of the change process are integrated in the evaluation of relevant theory.

APSS 471 ***Special Projects Seminar*** (6 credits)
Prerequisite: Completion of 30 credits in Specialization or Major in Applied Social Science and permission of the Department. A seminar course of field projects, surveys, and research studies undertaken by each student.

APSS 472 ***Special Projects Seminar*** (6 credits)
Prerequisite: Completion of 30 credits in Specialization or Major in Applied Social Science and permission of the Department. Students who have received credit for APSS 471 may register for APSS 472 provided the subject matter is different.

APSS 487 ***Independent Study in Applied Social Science*** (3 credits)
Prerequisite: Permission of the Department. This course is intended for students who wish to continue a project initiated in another course in the Department. The instructor of that course must agree to supervise this independent study.

APSS 490 ***Approaches to Applied Social Research*** (6 credits)
Prerequisite: Enrolment in the BA Specialization in APSS and completion of 60 credits in the degree programme. This course is a project seminar which explores research approaches commonly used by social practitioners such as action research, survey-feedback studies, and programme evaluation. Each of the alternative modes of research relate directly to social and organizational change. Approaches of particular interest in this course are those which maximize involvement by people in directing their own change. The course includes a research project which utilizes an approach to applied social research of most interest to the student. Lectures and laboratories.
NOTE: Students who have received credit for APSS 400 may not take this course for credit.

APSS 498 ***Advanced Topics in Applied Social Science*** (3 credits)

APSS 499 ***Advanced Topics in Applied Social Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.030 Biology

Chair
PAUL WIDDEN, *Associate Professor*

Professors
HILDEGARD E. ENESCO
RAGAI K. IBRAHIM
EDWARD J. MALY
ELAINE B. NEWMAN
ROSE SHEININ

Associate Professors
PAUL J. ALBERT
PERRY D. ANDERSON
SYMALA S. ASHTAKALA
CAROLYN BECKMAN
RICHARD T. CRONIN, s.j.
KULDIP S. DHINDSA
DAPHNE FAIRBAIRN
MURIEL B. HERRINGTON
NARINDER N. KAPOOR
BHINDI S. MANGAT
J. DANIEL McLAUGHLIN
ROBERT M. ROY
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REGINALD STORMS

Assistant Professors
CLAIRE G. CUPPLES
PATRICK J. GULICK
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Ajunct Professor
ANTHONY CHOI
FRANÇOIS ERGAN
RALPH GERMINARIO
HENRY KHOURI
DAVID THOMAS
EUGENIA WANG
ALEXANDER WOLSKY

University Research Fellows
LUC-ALAIN GIRALDEAU
JAMES GRANT

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
Courses offered by the Biology Department are classified as follows:

A. ANIMAL BIOLOGY COURSES
BIOL 230, 232, 233, 330, 331, 332, 333, 334, 335, 336, 337, 338, 431, 435, 436, 438, 439.

B. BOTANY COURSES
BIOL 240, 341, 342, 344, 345, 347, 348, 441, 442.

C. ECOLOGY COURSES
BIOL 250, 351, 352, 353, 355, 356, 452, 454, 456.

D. CELL AND MOLECULAR BIOLOGY COURSES
BIOL 220, 261, 262, 270, 362, 364, 365, 370, 460, 461, 462, 463, 464, 465, 467, 468, 469, 470.

E. BIOLOGY ELECTIVE COURSES
BIOL 298, 299, 320, 321, 322, 323, 380, 398, 399, 420, 480, 481, 490, and any of the Animal Biology, Botany, Ecology, or Cell and Molecular Biology courses. Approved courses outside the Department may be taken for Biology elective credits.

NOTE: Advanced Topics courses (BIOL 498, BIOL 499) will be given from time to time and may be applied to the above areas, where appropriate. The area will be indicated in the title (i.e. Advanced Topics in Botany, ...; Advanced Topics in Ecology, ...). Please consult current Biology Course Guide.

Although the Biology Department offers Honours, Specialization, Major and Minor programmes, we recommend that students wishing to pursue careers in Biology take either an Honours or Specialization programme. The Major and Minor programmes are not designed to provide an extensive enough background in Biology for students to progress to careers in the discipline. The Major should be considered by students requiring a less specialized degree, with a biology concentration or as part of a double major programme. The Minor is designed to be flexible and allow a student whose area of concentration is outside of Biology to take courses to provide either a general survey or to gain a more in depth understanding of one of the major areas of biology.
For those wishing to concentrate in a particular area, recommended sequences of courses are described in course guides available in the Biology Department. It is also strongly recommended that students taking any Biology programme take full advantage of the counselling available within the Department, in order to select the courses that will best meet their needs.

72 BSc Honours in Biology
An approved sequence of courses from the following selection constitutes an Honours in Biology. Students must consult with the Departmental Honours Adviser before registering for the Honours programme.

33 CHEM 221^{3*}, and 222^{3*}, 271^{3}; BIOL 230^{3}, 240^{3}, 250^{3}, 261^{3}, 270^{3}, 322^{3**}, 490^{6}
6 Chosen from BIOL 333^{6}, 346^{3}, 349^{3}, 364^{3} or 464^{3}
33 Additional Biology credits, no more than 9 of which may be taken from Group E.

NOTE: A minimum of 21 credits in 300- and 400-level Biology courses must be completed, excluding BIOL 490.
**Students entering the programme with CEGEP Organic Chemistry must replace these credits with Biology electives.*
***NOTE: A student who has taken MATH 242^3, 243^3, plus 3 credits from either MATH 343, 347 or 348 will be exempted from taking BIOL 322, and be credited with 3 credits in the Biology programme plus 6 elective credits. A student cannot replace BIOL 322 by taking MATH 242, 243 alone.*

60 BSc Specialization in Biology
An approved sequence of courses from the following selection constitutes a Specialization in Biology.

27 CHEM 221^{3*} and 222^{3*}, 271^3; BIOL 230^3, 240^3, 250^3, 261^3, 270^3, 322^{3**}
6 Chosen from BIOL 333^6, 346^3, 349^3, 364^3 or 464^3
27 Additional Biology credits, no more than 9 of which may be from Group E

NOTE: A minimum of 15 credits in 300- and 400-level Biology courses must be completed, excluding BIOL 490.
**Students entering the programme with CEGEP Organic Chemistry must replace these credits with Biology electives.*
***NOTE: A student who has taken MATH 242^3, 243^3, plus 3 credits from either MATH 343, 347 or 348 will be exempted from taking BIOL 322, and be credited with 3 credits in the Biology programme plus 6 elective credits. A student cannot replace BIOL 322 by taking MATH 242, 243 alone.*

42 BSc Major in Biology
An approved sequence of courses from the following selection constitutes a Major in Biology.

21 CHEM 221^{3*} and 222^{3*}, 271^3; BIOL 230^3, 240^3, 250^3, 261^3
3 Chosen from BIOL 322^3, 333^6, 346^3, 349^3, 364^3 or 464^3
18 Additional Biology credits of which no more than 6 may be from Group E

NOTE: A minimum of 6 credits in 300- or 400-level Biology courses must be completed.
**Students entering the programme with CEGEP Organic Chemistry must replace these credits with Biology electives.*
***A student who has taken MATH 242^3, 243^3, plus 3 credits from either MATH 343, 347 or 348 will be exempted from taking BIOL 322, and be credited with 3 credits in the Biology programme plus 6 elective credits. A student cannot replace BIOL 322 by taking MATH 242, 243 alone.*

24 Minor in Biology

12 Selected from *A. Animal Biology courses, B. Botany courses, C. Ecology courses, D. Cell and Molecular Biology courses.*
12 BIOL electives.

78 BSc Specialization in Geology-Ecology
See §31.140, Geology

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

BIOL 200 ***Fundamentals of Human Biology*** (6 credits)
A series of lectures, demonstrations, and seminars to provide non-biologists with a general survey of the fundamental principles of life, with special emphasis on the structures and functions of human beings. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit. This course covers the same material as CEGEP Biology 921/931.

BIOL 201 ***Introductory Biology*** (3 credits)
Fundamentals of plant and animal biology: basic physics and chemistry of life; cell and tissue structures and functions; anatomy and physiology of human systems; survey of plant and animal taxonomy, ecology, heredity and evolution. Lectures and laboratory.
NOTE: Students with CEGEP Biology 301, or equivalent, may not take this course for credit. Students entering BIOL programmes without CEGEP Biology 301, or equivalent, must take this course, but not for programme credit.

BIOL 203 ***Fundamental Nutrition*** (3 credits)
This course deals with food composition (carbohydrates, lipids, proteins, vitamins, and minerals), its absorption and utilization, energy balance, special diets, and food technology. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit.

BIOL 206 ***Elementary Genetics*** (3 credits)
A survey of classical and contemporary developments in the study of heredity, with particular attention to human examples. This course is open to the general student body. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit; may not be taken for credit with BIOL 205.

BIOL 207 ***Micro-Organisms and Humanity*** (3 credits)
A course designed for students registered in a programme other than one leading to the BSc degree. It considers the role of micro-organisms in plant and animal diseases, food spoilage, cellulose degradation, and water pollution, as well as their ecological, industrial, and pharmacological importance. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit.

BIOL 208 ***Environmental Biology I*** (3 credits)
This course examines the principles and concepts of ecosystems, the interaction of organisms and their environment. Energy flow and nutrient cycling in ecosystems, population dynamics, and community organization. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit.

BIOL 210 ***Genetics and Human Welfare*** (3 credits)
A course on the principles of heredity as understood by modern biology. It deals also with the application of genetic principles to organisms, including humans. The biological basis of social problems is dealt with at some length. Organic evolution and its implications for human life and welfare are considered. Lectures only.
NOTE: Students registered in a Biology or Biochemistry programme may not take this course for credit; may not be taken for credit with BIOL 206.
NOTE: Students who have received credit for BIOL 205 may not take this course for credit.

BIOL 230 ***Animal Biology*** (3 credits)
Prerequisite: CEGEP Biology 301 or equivalent. A survey of the major animal phyla, with emphasis on evolutionary trends, structure and function, behaviour and integration of organ systems. Lectures and laboratory.

BIOL 232 ***Entomology I*** (3 credits)
Prerequisite: BIOL 230. This course introduces the student to the variety and complexity of insect life. Basic classification is followed by a more detailed study of morphology and anatomy, together with some physiological considerations. Other topics such as adaptations for aquatic life, social behaviour, etc., are discussed. Laboratories begin with a field trip, the object of which is to observe and collect various insect species. The rest of the laboratory sessions complement the lectures. *Students are advised to begin an insect collection during the summer months preceding the course.* Lectures and laboratory.

BIOL 233 ***Entomology II*** (3 credits)
Prerequisite: BIOL 232. To the initiated students, this course presents an in-depth study of insect behaviour. Topics include sensory physiology, insects and plants, light and sound production, population dynamics, and insect ecology. An attempt is made throughout the course to emphasize the relationship between the structure and function of various insect parts. Lectures and seminars.

BIOL 240 ***Plant Biology*** (3 credits)
Prerequisite: CEGEP Biology 301 or equivalent. A survey of the major plant phyla, with emphasis on evolutionary trends, distribution, life cycles, morphology, development, physiology, anatomy. Lectures and laboratory.

BIOL 250 ***Fundamentals of Ecology*** (3 credits)
Prerequisite: CEGEP Biology 301 or equivalent. This course introduces factors which affect distribution and abundance of species; the physical-chemical environment, energy flow, and species interactions. Other topics introduced include adaptation to the abiotic and biotic environment, population regulation, ecological succession, species diversity and community structure. Lectures only.

BIOL 261 ***Genetics*** (3 credits)
Prerequisite: CEGEP Biology 301 or equivalent; CEGEP Biology 401 or equivalent recommended. A course to illustrate the fundamental principles of inheritance in plants, animals, and microorganisms. Mendelian genetics, gene linkage, and mutation are covered. The role of DNA as the hereditary material and the genetic code are studied in detail, as are the mechanisms of DNA, RNA, and protein synthesis. Lectures and laboratory.
NOTE: Students who have credit for BIOL 260 may not take this course for credit.

BIOL 262 ***Genetics II*** (3 credits)
Prerequisite: BIOL 261. This course develops further the principles introduced in BIOL 261 with the emphasis on an understanding at the molecular level. The following topics are covered: DNA and chromosome structure, replication, gene regulation, mutation, DNA damage and repair, extra-chromosomal elements and genetic engineering. Lectures only.
NOTE: If credit has been received for this topic under a BIOL 298 number, this course may not be taken for credit.

BIOL 270 ***Introductory Microbiology*** (3 credits)
Prerequisite: CEGEP Biology 301 or equivalent. Structure and function of bacteria and viruses as related to industry, health, agriculture, and ecology. Laboratory exercises illustrate lecture material and introduce methods of handling microorganisms. Lectures and laboratory.

BIOL 298 ***Selected Topics in Biology*** (3 credits)

BIOL 299 ***Selected Topics in Biology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

BIOL 320 ***History of Biology*** (3 credits)
Prerequisite: Twelve credits from the Department of Biology. The lecture material is oriented toward the beginnings of formal biology in relation to the state of knowledge at the time, and the development of these ideas up to the beginning of the present century. Emphasis is on broad principles rather than on encyclopedic or biographical notes. Much illustrative or detailed information is provided by the class, since each student must present a seminar on a topic chosen from the history of biology. Lectures only.

BIOL 321 ***Evolution*** (3 credits)
Prerequisite: Any twelve credits from the Department of Biology. A course that examines concepts leading from Darwin's theory to a modern synthesis of evolution. Lectures only.

BIOL 322 ***Biostatistics I*** (3 credits)
Prerequisite: Nine BIOL credits in a Biology major, Honours or Specialization programme. Statistical methods for the biological sciences; sampling; experimental design; data description; elementary probability; binomial, Poisson and Normal distributions; statistical inference; hypothesis testing; chi-square; analysis of variance; correlation; regression; covariance analysis; and analogous non-parametric techniques. Lectures and laboratory. *NOTE See §200.7*
NOTE: Students who have received credit for BIOL 222 or MATH 241 may not take this course for credit.

BIOL 323 ***Biology of Aging*** (3 credits)
Prerequisite: BIOL 230; BIOL 261. Aging as a biological process is examined at physiological, evolutionary, genetic, cellular, and molecular levels. Current theories of aging are examined: these include the rate-of-living theory, the error-catastrophe theory, the autoimmune theory, the cross-linkage theory, and the somatic-mutation theory. Studies on aging in protozoans, plants, animals, and cells in culture are evaluated in relation to these theories. Lectures only.

BIOL 330 ***Biology of the Vertebrates*** (3 credits)
Prerequisite: BIOL 230. A survey of the fishes, amphibians, reptiles, birds and mammals. Emphasis is placed on phylogeny of the groups and the adaptations that fit them to their environments. Topics include zoogeography, physiology, communication, reproduction, etc. Lectures only.
NOTE: Students who have received credit for BIOL 231 may not take this course for credit.

BIOL 331 ***Comparative Vertebrate Anatomy*** (6 credits)
Prerequisite: BIOL 230. A comprehensive study of the development and structure of the systems of a representative series of vertebrates from a comparative and evolutionary point of view, with some emphasis on the mammals. In the laboratory, representatives of the principal classes of vertebrates are dissected. Lectures and laboratory.

BIOL 332 ***Parasitology*** (3 credits)
Prerequisite: BIOL 230 or BIOL 234, previously or concurrently. A survey of the parasitic groups of invertebrates, with special reference to human parasites. Lectures and laboratory.
NOTE: This course may not be taken for credit with BIOL 339.

BIOL 333 ***Animal Physiology*** (6 credits)
Prerequisite: BIOL 230; CHEM 271; 30 credits in Biology. An integrated study of basic physiological phenomena of vertebrates. Topics discussed include muscle function, nervous system, circulation, respiration, temperature regulation, digestion, metabolism, excretion, and endocrinology. Lectures and laboratory.

BIOL 334 ***Vertebrate Embryology*** (3 credits)
Prerequisite: BIOL 230. The fundamental processes of growth and development in vertebrates are examined. Morphogenetic events in selected vertebrate species are compared by laboratory study. Topics covered include reproduction, gemetogenesis, fertilization, cleavage patterns, gastrulation, organogenesis, metamorphosis, regeneration and extra-embryonic membranes. Lectures and laboratory.

BIOL 335 ***Histology I*** (3 credits)
Prerequisite: BIOL 230. A comparative study of the microscopic characteristics of cells, tissues, and organs of vertebrates. Lectures and laboratory.

BIOL 336 ***Histology II*** (3 credits)
Prerequisite: BIOL 335; BIOL 331 recommended. An advanced comparative study of the vertebrate organ systems at the ultrastructural and histological level. Lectures and laboratory.

BIOL 337 ***Invertebrate Zoology I*** (3 credits)
Prerequisite: BIOL 201. The Protozoa, Acoelomate and Pseudocoelomate Invertebrates: A detailed survey of non-coelomate invertebrates which deals in depth with the Protozoa, Porifera, Cnidaria, Platyhelminthes, Nematoda, Acanthocephala and Rotifera. Emphasis in lectures is placed on phylogeny, physiology, functional morphology, adaptations to specific environments and reproduction. Close attention is paid to evolutionary trends within and between phylogenetic groups. Both origin of the metazoa from single-celled ancestors and the role of the lower metazoa in the evolution of higher animals are examined. Laboratory work stresses morphology of both preserved and living material and, where possible, live specimens are used to demonstrate behaviour. Lectures and laboratories.
NOTE: Students who have received credit for BIOL 234 may not take this course for credit.

BIOL 338 ***Invertebrate Zoology II*** (3 credits)
Prerequisite: BIOL 230 or BIOL 234. The Coelomate Invertebrates: A detailed examination of the major coelomate invertebrate phyla including the Annelids, Molluscs, Arthropods (excluding Insects), Echinoderms and, if time permits, minor coelomate phyla. Lectures stress functional morphology, physiology and reproduction. Emphasis in the laboratory is on dissection of a selected representative from each group and a detailed examination of characteristics of a range of other representatives of each group. Where possible living specimens are used to demonstrate behaviour. Lectures and laboratories.
NOTE: Students who have received credit for BIOL 235 may not take this course for credit.

BIOL 341 ***Biology of the Fungi*** (3 credits)
Prerequisite: BIOL 270. A study of the morphology, taxonomy, phylogeny, and ecology of the fungi; their importance in agriculture, industry, medicine, and research is emphasized. Lectures and laboratory.

BIOL 342 ***Eastern North American Flora*** (3 credits)
Prerequisite: BIOL 240, previously or concurrently. A study of higher plant life occurring in Eastern North America, including recognition, collection, identification, classification, and distribution. Field work for practical experience with the regional flora in various habitats. Lectures and laboratory.

BIOL 344 ***Biology of Algae*** (3 credits)
Prerequisite: BIOL 240. Taxonomy, physiology, and ecology of algae, with special consideration of their involvement in water pollution, sewage treatment, primary production, and their utilization in industry. Lectures and laboratory.
NOTE: Students who have received credit for BIOL 246 may not take this course for credit.

BIOL 345 ***Horticultural Science*** (3 credits)
Prerequisite: BIOL 240. The scientific concepts of horticulture are emphasized. Topics include plant breeding for adaptation to climate, chemical regulation of plant processes and effects on crop yield, environmental factors in crop production, pollutant impact on horticulture, problems in bulk storage, processing and marketing of perishables. The role of horticultural science in meeting world food requirements, as well as its impact on society, are discussed. Lectures only.

BIOL 346 ***Physiology of Plant Development*** (3 credits)
Prerequisite: BIOL 240. Physiological and biochemical aspects of plant growth and development. Plant responses to growth regulators, their mode of action and their use in plant tissue culture. The role of light and temperature in seed germination, dormancy and flowering. Lectures and laboratory.

BIOL 347 ***Plant Anatomy*** (3 credits)
Prerequisite: BIOL 240. A study of the internal structure of the plant as related to the processes of growth and metabolism. An experimental approach is presented to the study of the relationship between structure and function of various parts of the plant. The study of pathological, ecological, and economic aspects of anatomy, with emphasis on developmental anatomy. Laboratory work includes the preparation of permanent slides, using plant microtechnique. Lectures and laboratory.

BIOL 349 ***Plant Nutrition and Metabolism*** (3 credits)
Prerequisite: BIOL 240. A study of the physiological processes of higher plants relating to water relations, mineral nutrition, photosynthesis, carbohydrate and nitrogen metabolism. These processes are discussed in relation to the environmental factors which govern them. Lectures and laboratory.

BIOL 352 ***Plant Field Ecology*** (3 credits)
Prerequisite: BIOL 240; BIOL 250; BIOL 322. This course is normally offered for a two-week period during August at the Lacolle Centre. It involves identification of local plant species, methods of sampling of communities, and examination of the pattern of plant communities in the area. Handling of data on populations and communities is discussed, as well as statistical analysis of population and community data. A mixture of formal lectures, organized field studies, and informal discussion. Students are required to hand in a written report after the course has ended.

BIOL 355 ***Fundamentals of Limnology*** (3 credits)
Prerequisite: BIOL 250, previously or concurrently. An introduction to the study of inland waters ecosystems with major emphases on geographical, physical and chemical characteristics that govern lake productivity. Topics include: the origin of lake basins, lake morphology and morphometry, hydromechanics, the optical and thermal properties of lakes, dissolved chemicals. Questions concerning water pollution are studied. Lectures only.

BIOL 356 ***Microbial Ecology*** (3 credits)
Prerequisite: BIOL 250; BIOL 270. The properties of microbial habitats, structure and dynamics of microbial communities and their role in the decomposition processes. Particular stress is placed on the interactions between microbes and higher organisms in terrestrial ecosystems that mediate the cycling of nutrients between biotic and abiotic parts of the system. Lectures and laboratory.

BIOL 357 ***Ecology and Behaviour Field Course*** (3 credits)
Prerequisite: BIOL 250; BIOL 322; permission of the Department. The course involves acquiring technical skills in the fields of limnology, animal behaviour, plant ecology, population and community ecology. This course is given in association with the Department of Biology of McGill University. The course lasts two

full weeks at the end of August and is held at the Mont St. Hilaire-Gault Estate Field Station of McGill University.

BIOL 358 ***Introduction to Animal Behaviour*** (3 credits)
Prerequisite: BIOL 250. This course focuses primarily, although not exclusively, on the proximate causation of behaviour. Topics include development, learning, genetics, hormonal control of behaviour, motivation, cyclical changes in behaviour as well as sensory processing, orientation and perception. The course is geared to provide an ecological perspective on animal behaviour. Lectures and project.

BIOL 359 ***Evolutionary Ecology*** (3 credits)
Prerequisite: BIOL 250. This course covers current topics in evolutionary ecology and specific topics covered may change from year to year. The aim of the course is to provide students with the knowledge and ability to critically evaluate and test evolutionary hypotheses in ecology and behaviour. Topics covered may include mechanisms of evolution, natural selection, the unit of evolution, and the adaptive significance and evolution of such ecologically relevant traits as body size, sex, sex ratio, and senescence. Lectures only.

BIOL 361 ***Cellular Metabolism I*** (3 credits)
Prerequisite: CHEM 221; CHEM 222. The course covers various simple aspects of metabolism in both animals and plants, distribution of cell organelles and their metabolism, energy production and utilization, nucleic acids and protein synthesis. Lectures only.
NOTE: This course may not be taken for credit with CHEM 271.

BIOL 362 ***Cellular Metabolism II*** (3 credits)
Prerequisite: BIOL 361 or CHEM 271. Emphasis is placed on various aspects of intermediary metabolism, regulation of cellular processes and bioenergetics; transmission and expression of genetic information. Lectures and laboratory.

BIOL 364 ***Cell Physiology*** (3 credits)
Prerequisite: CHEM 221; CHEM 222 or 30 credits; enrolment in Biology Honours, Specialization or Major programme. A survey of the mechanisms involved in functions of single cells and subcellular components, particularly organelles; membrane phenomena, motility, bioenergetics, and cellular responses to environmental stress, including ionizing radiation, cold, and hydrostatic pressure. Lectures and laboratory.

BIOL 365 ***Cytology*** (3 credits)
Prerequisite: CHEM 221; CHEM 222; 30 credits; enrolment in Biology Honours, Specialization or Major programme. Cell structure and ultrastructure, with reference to organelle function; microscopic and cyto-chemical techniques of analysis. Emphasis is on experimental, molecular, and ultrastructure analysis, to achieve a correlation between cell structure and function. Lectures and laboratory.

BIOL 370 ***Intermediate Microbiology*** (3 credits)
Prerequisite: BIOL 270; CHEM 221; CHEM 222;CHEM 271 recommended. Designed to continue from BIOL 270. Nutrition and metabolism of microorganisms, with special emphasis on metabolic processes unique to microorganisms (fermentations, oxidation of inorganic compounds, aerobic respiration, and anaerobic respiration). Basic immunology and immunochemistry; brief discussion of microbes in medicine and industry. Laboratory includes metabolic and serologic methods of identifying microorganisms. Lectures and laboratory.

BIOL 380 ***Nutrition*** (3 credits)
Prerequisite: CHEM 221; CHEM 222; CHEM 271 recommended. The concept of a balanced diet is studied in relation to caloric content, and to protein, lipid, carbohydrate, vitamin, and mineral requirements. The consequences of dietary deficiencies are examined. Special topics such as dieting, organic foods, megavitamins, food additives, and toxins are discussed. Lectures only.

BIOL 381 ***Biology of Pollutants*** (3 credits)
Prerequisite: BIOL 250. The purpose of this course is study the impact of pollution on ecosystems. The major classes of pollutants are considered in relation to their nature, origin and distribution, and particularly their mode of action on individual organisms and ecosystems. Air, water and soil are examined with their respective pollutants and a major emphasis is given to quantitative assessments of various agents and their effects. The course also includes theoretical and practical aspects of bioassays and an overview of case studies and of control measures. Lectures only.

BIOL 398 ***Intermediate Topics in Biology*** (3 credits)

BIOL 399 ***Intermediate Topics in Biology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

BIOL 420 ***Radiation Biology and Radiotracer Methodology I*** (3 credits)
Prerequisite: BIOL 261; BIOL 364. A survey of the elements of radiation physics, with emphasis on the properties of ionizing radiation and its interaction with matter, including dosimetry and methods of radiation counting. The biological effects of radiation at the macromolecular, cellular, and organismal level are considered. Lectures and laboratory.

BIOL 431 ***Biology of Fishes*** (3 credits)
Prerequisite: BIOL 230; BIOL 250; BIOL 322. A survey of the fishes with emphasis placed on phylogeny of the groups and the anatomical, physiological and biochemical adaptations to their environments. Ecology and Zoogeography are considered. Laboratory exercises include a number of short- and long-term experiments on the growth, physiology and behaviour of fishes. Lectures and laboratories.

BIOL 432 ***Comparative and Environmental Physiology*** (3 credits)
Prerequisite: BIOL 333. The primary theme of this course is the physiological interrelationships between animals, and their environments. A comparative study of selected physiological processes in diverse phyla, dealing with behavioural and physiological adaptations in animals. Lectures and seminars.

BIOL 435 ***Advanced Parasitology*** (3 credits)
Prerequisite: BIOL 332. An examination of the biological aspects of parasitism. Proposed topics include host findings behaviour, distribution of parasites within host populations, seasonal variation in parasite populations and its causes, interspecific and intraspecific interactions among parasites and the evolution of host parasite relations. Lectures and laboratory.
NOTE: Students who have received credit for BIOL 339 may not take this course for credit.

BIOL 436 ***Biology of the Mammals*** (3 credits)
Prerequisite: BIOL 330; third-year standing. A survey of the Class Mammalia. Theories as to the origin of mammals, and the distribution, ecology and adaptations of modern mammals are examined. A term paper on a subject chosen in consultation with the instruction is required. Lectures only.

BIOL 441 ***Plant Biochemistry*** (3 credits)
Prerequisite: CHEM 271. Biochemical study of the natural constituents and secondary metabolites unique to plants. Their biosynthesis, biotransformations, and functions in plants, as well as their economic and pharmacologic importance are stressed. Lectures only.

BIOL 442 ***Perspectives in Plant Tissue Culture and Plant Biotechnology*** (3 credits)
Prerequisite: BIOL 349. This course looks at plant-growth regulators, nutritional requirements and other factors necessary for in-vitro culturing of plant cells and tissues. The course also discusses methods available for nuclear transfers and the propagation of transformed plants. Lectures only.
NOTE: If credit has been received for this topic under a BIOL 498 number, this course may not be taken for credit.

BIOL 452 ***Ecological Genetics*** (3 credits)
Prerequisite: BIOL 250; BIOL 261; BIOL 322; BIOL 353 or permission of the Department. A course emphasizing the interface between ecology, population genetics and evolution: the study of genetic variation in natural populations and its relevance to evolutionary processes. Topics include, measuring genetic diversity in natural populations; patterns of diversity; selection; phenotype versus genotype in evolution; neutral variation, genetic load; genetic structure; the species concept; the unit of evolution; Neo-Darwinism and the modern synthesis. Lectures only.

BIOL 453 ***Behavioural Ecology and Sociobiology*** (3 credits)
Prerequisite: BIOL 250; BIOL 358. This course is meant to allow students who already have a basic knowledge of animal behaviour to integrate the phenomenon of behaviour into ecological and evolutionary perspectives. The lecture topics include foraging theory, both social and non-social, habitat distribution theory, sexual selection resulting from mate choice and intra-sexual competition and evolution of social systems in both vertebrates and invertebrates. The evolution of social systems are studied from the point of view of mating systems and advantages of gregarious behaviour. Lectures only.

BIOL 454 ***Population Ecology*** (3 credits)
Prerequisite: BIOL 322; BIOL 353. A theoretical approach to ecological problems. Evolutionary aspects of ecological problems, population dynamics, species diversity, stability of ecosystems, regulation of population size, competition, and predation. Lectures only.

BIOL 456 ***Current Advances in Ecological Research*** (3 credits)
Prerequisite: BIOL 250; BIOL 322; a minimum of 3 credits from BIOL 352, BIOL 355, BIOL 356, BIOL 357, BIOL 358, or BIOL 359, or permission of the Department. This course covers all aspects of current research in ecology, including evolutionary, population, behavioural, conservation and systems ecology. Through oral presentations and written critiques of papers from current ecological journals, students learn to evaluate critically both the strengths and weaknesses of current research hypotheses and methodologies. Papers for discussion are selected in consultation with the instructor, and students are evaluated on the basis of oral presentations, written critiques and participation in class discussions. Lectures only.
NOTE: If credit has been received for this topic under a BIOL 498 number, this course may not be taken for credit.

BIOL 460 ***Molecular Genetics*** (3 credits)
Prerequisite: BIOL 261; or BIOL 360; CHEM 271 previously or concurrently, or permission of the Department. Basic microbial and molecular genetics, including isolation and characterization of mutants, methods of mapping mutants, transposons, episomes, and recombinant DNA techniques. Lectures and conferences.

BIOL 461 ***Advanced Genetics*** (3 credits)
Prerequisite: BIOL 261 or BIOL 360. Directed readings and seminars in classical and contemporary genetics designed to expose the student to research literature and problems. Students probe in greater depth areas of particular interest in order to develop a critical sense and deepen an understanding of past and current work in this field. Seminars only.

BIOL 462 ***Immunology*** (3 credits)
Prerequisite: BIOL 261; BIOL 364; CHEM 271 previously or concurrently. A course in modern immunology stressing the following areas of study: the structure and properties of antigens and antibodies; the nature of the immune response; cellular-antibody synthesis; genetic aspects of antibody synthesis; theories relating antibody specificity to genetic potential. Lectures and conferences.

BIOL 463 ***Developmental Biology*** (3 credits)
Prerequisite: BIOL 260; BIOL 334. This course examines mechanisms of cell and tissue interactions in development and differentiation. Cell sorting and recognition, as well as the processes controlling growth and regeneration are analyzed from an experimental point of view. Experiments involving gene transplants, nuclear transplants and allophenic mice are discussed to gain insights on the genetic control of development. Lectures only.

BIOL 464 ***Advanced Cell Physiology*** (3 credits)
Prerequisite: BIOL 364; CHEM 271 previously or concurrently. Lectures and seminars dealing with selected topics in cell physiology, emphasizing a molecular experimental approach. Lectures only.

BIOL 465 ***Biological Regulatory Mechanisms*** (3 credits)
Prerequisite: BIOL 261; CHEM 271; or permission of the Department. The molecular basis of the control of metabolic pathways, with an emphasis on procaryote systems. The course concentrates on the analysis of the rationale of experimentation used to elucidate these regulatory mechanisms. Lectures and conferences.

BIOL 467 ***Cytogenetics*** (3 credits)
Prerequisite: BIOL 261; BIOL 365; or permission of the Department. A detailed study of eukaryotic chromosomes, plant and animal, their structures and behaviour, normal and abnormal; species evolution and stabilization; various anomalies, ploidy, heterosis, apomixy; human cytogenetics. Lectures only.

BIOL 468 ***Gene Structure*** (3 credits)
Prerequisite: BIOL 261; BIOL 262; BIOL 270; CHEM 271; or permission of the Department. This course deals with gene regulation in eukaryotes. Topics covered include transcription, transcript processing, translation, and post-translational processes. Lectures only.
NOTE: If credit has been received for this topic under a BIOL 498 number, this course may not be taken for credit.

BIOL 469 ***DNA Repair*** (3 credits)
Prerequisite: BIOL 261; BIOL 270; CHEM 271 or permission of the Department. This course deals with the chemical alterations arising spontaneously in DNA during semi-conservative replication and as a result of exposure to ionizing radiation, ultraviolet radition and genotoxic chemicals. The repair of DNA damage by various enzymatic processes in both prokaryotic and eukaryotic cells is discussed. Lectures only.
NOTE: If credit has been received for this topic under a BIOL 498 number, this course may not be taken for credit.

BIOL 470 ***Microbial Physiology*** (3 credits)
Prerequisite: BIOL 270; CHEM 271; 3 other advanced credits in biochemistry previously or concurrently; or permission of the Department. Comparative biochemistry of procaryotes—a study of the biochemical activities underlying the life of microorganisms. A description of the diverse biochemical adaptations used by microorganisms to obtain energy and building materials from their various environments. Lectures and conferences.

BIOL 480 ***Ecotoxicology*** (3 credits)
Prerequisite: BIOL 250; BIOL 322; CHEM 221; CHEM 222; 60 credits. This course presents a survey of the ecological behaviour and effects of toxicants in nature. It considers the impact of pollutants on various ecosystems, including freshwater, marine and terrestrial. Topics include the effects of certain categories of toxicants on organisms, as well as their populations and communities. The major sources and environmental pathways of pollutants are discussed. Of particular interest are the subjects of bioaccumulation and biomagnification of pollutants in trophic systems. Lectures only.

BIOL 481 ***Principles of Toxicology*** (3 credits)
Prerequisite: BIOL 322; 30 credits in Biology or Chemistry Honours, Specialization or Major programme; permission of the Department. This course deals with the origin and scope of toxicology. It introduces students to basic toxicity criteria required for safety and risk assessments. Principles which govern exposure and response to toxicants are discussed. Other topics include an introduction to the processes which determine the fate of a toxicant in a target organism. Modifying factors of toxicity are considered. The course concludes by surveying the effects of some representative toxicants. Lectures only.

BIOL 482 ***Intermediate Statistics*** (3 credits)
Prerequisite: BIOL 322; 60 BIOL credits. The focus of this course is on two fundamental procedures in statistics: regression analyses and analysis of variance. The critical assumptions upon which these two procedures are based are examined. This knowledge is essential for the proper application of these procedures in research. Lectures and laboratories.
NOTE: If credit has been received for this topic under a BIOL 498 number, this course may not be taken for credit.

BIOL 490 ***Independent Study*** (6 credits)
Prerequisite: 60 credits in Honours Biology, or permission of the Department. In this course, the student undertakes a special research project selected in consultation with, and conducted under, the supervision of a faculty member of the Department. The project is intended to develop the student's knowledge of standard scientific procedures, including methods of researching scientific literature, the planning and execution of experimental and analytical procedures, the writing of a formal report, and the presentation of a seminar on the project.
NOTE: Students may register in September, January or June for this course, but work must continue over two consecutive semesters.

BIOL 498 ***Advanced Topics in Biology*** (3 credits)

BIOL 499 ***Advanced Topics in Biology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Course Guide/Undergraduate Class Schedule.

31.040 Canadian Studies

The Canadian Studies Programme seeks to give students a better understanding of the diverse origins and multi-faceted character of Canada. It provides the opportunity to obtain a liberal arts education given direction and depth by a focus on Canada. See separate departmental entries for details on courses in the programme.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Specialization in Canadian Studies*

6 CDNS 220[6]
6 ENGL 290[6]; or ENGL 291[3] and 292[3]
6 French Language, at a level to be determined *in consultation with the Département d'études françaises*
6 HIST 203[3] and 205[3]
6 CDNS 421[6]
30 Elective credits in related Canadian content courses, *chosen in consultation with the Coordinator,* from Anthropology, Art History, Communication Studies, Economics, Education, English, Études françaises, Geography, History, Interdisciplinary Studies, Journalism, Political Science, Religion, Sociology, and World Music.

42 BA Major in Canadian Studies*

6 CDNS 220[6]
6 ENGL 290[6]; or ENGL 291[3] and 292[3]
6 French Language, at a level to be determined *in consultation with the Département d'études françaises*
6 HIST 203[3] and 205[3]
6 CDNS 421[6]
12 Elective credits in related Canadian content courses, *chosen in consultation with the Coordinator,* from Anthropology, Art History, Communication Studies, Economics, Education, English, Études françaises, Geography, History, Interdisciplinary Studies, Journalism, Political Science, Religion, Sociology, and World Music.

30 Minor in Canadian Studies*

6 CDNS 220[6]
6 ENGL 290[6]; or ENGL 291[3] and 292[3]
6 French Language, at a level to be determined *in consultation with the Département d'études françaises*
6 HIST 203[3] and 205[3]
6 CDNS 421[6]

**Admission suspended for 1991-92.*

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

CDNS 220 ***Introduction to Canadian Studies*** (6 credits)
Prerequisite: Canadian Studies Major, or permission of the Coordinator.
NOTE: Students who have received credit for INTE 220 may not take this course for credit.

CDNS 298 ***Selected Topics in Canadian Studies*** (3 credits)

CDNS 299 ***Selected Topics in Canadian Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CDNS 398 ***Selected Topics in Canadian Studies*** (3 credits)

CDNS 399 ***Selected Topics in Canadian Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CDNS 421 ***Seminar in Canadian Studies*** (6 credits)
Prerequisite: CDNS 220 or permission of the Coordinator.
NOTE: Students who have received credit for INTE 421 may not take this course for credit.

CDNS 498 ***Advanced Topics in Canadian Studies*** (3 credits)

CDNS 499 ***Advanced Topics in Canadian Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.050 Chemistry and Biochemistry

Chair
PETER H. BIRD, *Professor*

Professors
LAWRENCE D. COLEBROOK
COOPER H. LANGFORD
NICK SERPONE
OSWALD S. TEE
ROGER H.C. VERSCHINGEL

Associate Professors
THOMAS J. ADLEY
MARY BALDWIN
STEPHEN J. DAUNT
MARK DOUGHTY
ANN ENGLISH
ZACHARIAS HAMLET
MICHAEL G. HOGBEN
MARY J. KORNBLATT
RAYMOND LE VAN MAO
ROBERT H. PALLEN
ROBIN T.B. RYE
GERALD J. TRUDEL
RONALD A. WESTBURY
RAYMOND H. ZIENIUS

Assistant Professors
FRED ABLENAS
MICHAEL F. BELL
JOHN A. CAPOBIANCO
GEORGE DENES
BRUCE HILL
RAHAT KHAN
MARCUS F. LAWRENCE
JUSTIN B. POWLOWSKI
DEVENDRA SHARMA

Adjunct Associate Professors
DONALD GAMBLE
BHUVAN PANT

Adjunct Assistant Professor
JOHN DIMAIO

Students are responsible for satisfying their particular degree requirements.

All students are advised to include a course in a computer language in their degree programme.

The superscript indicates credit value.

The Order of Chemists of Québec has fully accredited the curricula of i) Honours in Chemistry, ii) Specialization in Analytical Chemistry, iii) Specialization in Biochemistry, iv) Specialization in Chemistry. Upon satisfactory completion of any of the above-mentioned programmes, a graduate is eligible for membership in the Order. A working knowledge of French is required.

The BSc Specialization in Synthetic Materials does not lead to accreditation as a Professional Chemist by The Order of Chemists of Québec.

Students should note that CHEM 419, 450, and 479 have a performance prerequisite and are essential for Honours and Specialization programmes. Students who cannot meet these prerequisites will not be able to complete the programmes but may complete a Major. For more details, students should consult with the Department.

Courses that consist of both laboratories and lectures require that a satisfactory performance be obtained in each of the components for successful completion of the course.

45 Core Programme in Chemistry

39 CHEM 217^3, 218^3, 221^3, 222^3, 231^2, 233^2, 238^1, 239^1, 241^3, 271^3, 312^3, 324^3, 325^3, 330^1, 331^2, 332^2, 337^1

6 Chosen from either CHEM 242^{3*}, 341^{3*} or, CHEM 374^{3**}, 375^{3**}

**Students registered in Specialization in Chemistry or Analytical Chemistry, or Major in Chemistry normally take these courses.*

***Students registered in Specialization or Major in Biochemistry normally take these courses.*

BSc Honours in Chemistry

An Honours in Chemistry programme shall consist of completion of the requirements of any one of the Specialization programmes offered by the Department, with the exception of the BSc Specialization in Synthetic Materials, with the election of CHEM 450^6 as appropriate.

Students must meet the University regulations concerning the Honours degree.

Honours students in second year and beyond are expected to attend Departmental Seminars.

60 BSc Specialization in Chemistry

45 Core Programme

3 MATH 220^3

12 Additional credits in Chemistry, which must include *CHEM 419^6

**With Departmental permission, the student may substitute CHEM 450^6 for CHEM 419^6.*

69-72 BSc Specialization in Biochemistry

45 Core Programme

9 BIOL 261^3, 270^3, 364^3

Biochemistry Option (69 credits total)

3* CHEM 479^3

6 Chosen from CHEM 471^3, 473^3, 474^3, 475^3, 476^3, 478^3, 481^3

3* 400-level CHEM

3 400-level BIOL

These 6 credits may be replaced with CHEM 450[6], with Departmental approval.

***Medicinal Chemistry Option* (72 credits total)

3 CHEM 479[3]
6 BIOL 333[6]***
6 CHEM 473[3] and 474[3]
3 CHEM 475[3] or 476[3]

***This option is suspended for 1989-90, 1990-91 and 1991-92.*
****NOTE: BIOL 230[3] is a prerequisite for this course.*

63-64 BSc Specialization in Analytical Chemistry

45 Core Programme
6 CHEM 290[3], 328[3]
3-4 CHEM 392[3]
or
PHYS 295[2], 296[2]
3 Chosen from CHEM 398[3] or 498[3] (the topic must be in Analytical Chemistry)
6 *CHEM 419[6] (the topic must be in Analytical Chemistry)

**With Departmental permission, the student may substitute CHEM 450[6] for CHEM 419[6].*

78 BSc Specialization in Geology-Chemistry

See §31.140 Geology

64 BSc Specialization in Synthetic Materials

56 MATH 262[3], 263[3]; PHYS 253[3], 254[3], 295[2], 296[2], 354[3], 496[4]; CHEM 217[3], 218[3], 221[3], 222[3], 231[2], 233[2], 241[3], 302[2], 312[3], 327[3], 328[3], 482[3]
8 Chosen from PHYS 232[3], 252[3], 335[3], 355[3], 396[5]; CHEM 332[2], 419[6], 435[3], 492[3], 498[3]*

**NOTE: CHEM 498[3] must be heterogeneous catalysis, organometallic chemistry or inorganic solid state chemistry.*
NOTE: Mathematics and Statistics options as approved by the Programme Director.
NOTE: 6 credits must be at the 400 level.

45 BSc Major in Chemistry

45 Core Programme
Substitution of courses from within the Core Programme by other courses in Chemistry or related disciplines (Mathematics, Physics, Biology, Geology) up to a maximum of 9 credits, will be accepted, if previously approved by a Departmental programme adviser. It is expected that such substitutions will be in accord with the overall programme of study being followed by the student.

45 BSc Major in Biochemistry

36 Core Programme, but *without* CHEM 238[1], 239[1], 312[3], 330[1], 332[2], 337[1]
9 Chosen from CHEM 479[3]; BIOL 261[3], 270[3], 364[3]

24 Minor in Chemistry

24 Chosen from the Department's offerings, with due regard to prerequisites, such that the courses chosen form a coherent pattern which complements the student's other areas of study. The course pattern chosen must have been previously approved by a Departmental programme adviser.

33 Certificate in Scientific Measurement (Chemistry Option)

19 CHEM 217[3], 218[3], 290[3], 312[3], 392[3], 491[4]
14 PHYS 295[2], 296[2], 396[5], 397[5]

NOTE: Students may replace PHYS 396[5] with the two courses PHYS 390[3] and PHYS 491[3] if they wish.

Concordia students may transfer into the Certificate programme all applicable Concordia credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. Students from other institutions may transfer up to *twelve* applicable credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

CHEMISTRY AND BIOCHEMISTRY CO-OPERATIVE PROGRAMME

Director
RAYMOND H. ZIENIUS, *Associate Professor*

The Chemistry and Biochemistry Co-operative Programme is offered to students who are enrolled in the BSc Honours or Specialization in Chemistry, Biochemistry, or Analytical Chemistry and Specialization in Synthetic Materials. Students interested in applying for the Chemistry and Biochemistry Co-op should refer to §23 where a full description of the admission requirements is provided.

Academic content is identical to that of the regular programme, but six study terms are interspersed with four work terms.

Each student is supervised personally and must meet the requirements specified by the Faculty of Arts and Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Chemistry and Biochemistry Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

A student may be exempted from one or more of the introductory courses, on the basis of work done at CEGEP level. Where exemptions are given, the courses must be replaced with an equivalent number of credits in the sub-discipline involved, in order that the student successfully complete any of the programmes approved by the Order of Chemists of Québec.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

CHEM 205 ***General Chemistry I*** (3 credits)
Stoichiometry, states of matter, atomic structure, electron structure of atoms, the periodic table, periodic properties, bonding, solids. Lectures and laboratories.
NOTE: This course presumes a good grounding in secondary school mathematics. Students lacking such grounding, or non-Science students seeking only an awareness of chemistry, are advised to enrol in CHEM 208[3].
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

CHEM 206 ***General Chemistry II*** (3 credits)
Prerequisite: CHEM 205. Thermochemistry, solutions and their properties, equilibrium, ionic equilibrium, pH, buffers, kinetics, reaction mechanisms, other selected topics related to biochemistry, biology, and engineering. Lectures and laboratories.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

CHEM 208 ***Chemical Hazards in the Work Environment*** (3 credits)
An introduction to chemistry, chemical hazards and the social history of chemistry. A study of toxicity, combustion, corrosion, explosives, radiation and water reactive materials in the work environment. The course concentrates on establishing the chemical vocabulary and concepts necessary to understand the social impact of chemistry in relation to occupational health and safety, firefighting, and environmental hazards. The necessary non-quantitative knowledge of chemistry is developed as the course unfolds.
NOTE: This course is not a prerequisite for any chemistry course. This course may not be taken for credit by science students.

CHEM 217 ***Introductory Analytical Chemistry I*** (3 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; 203; or equivalent courses. Precipitation methods and solubility products, activity, chemical equilibria and titration curves of neutralization and complexation systems; treatment of analytical data. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 211 or GEOL 324 may not take this course for credit.

CHEM 218 ***Introductory Analytical Chemistry II*** (3 credits)
Prerequisite: CHEM 217. Chemical equilibria and titration curves of oxidation-reduction, precipitation, and non-aqueous systems; potentiometry and potentiometric titrations; introduction to spectroscopy with emphasis on molecular and atomic absorption spectroscopy, fluorescence spectroscopy. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 211 or GEOL 324 may not take this course for credit.

CHEM 221 ***Introductory Organic Chemistry I*** (3 credits)
Prerequisite: CEGEP Chemistry 201 or equivalent. Basic aspects of orbitals and their role in covalent bonding; delocalization of electrons. Alkanes: structure, nomenclature, isomerism, reactions. Introductory stereochemistry: enantiomers, diastereomers, conformers, Fischer and Newman projections, specification of chirality, E/Z isomerism. Conformations of cyclic compounds. Alkylhalides: S_N1; S_N2; E1; E2 reaction mechanisms. Free-radical reactions, organometallic compounds. Chemistry of alcohols, ethers and related compounds. Chemistry of alkenes, alkynes and dienes. Lectures and laboratory.

CHEM 222 ***Introductory Organic Chemistry II*** (3 credits)
Prerequisite: CHEM 221 or one semester CEGEP Organic Chemistry. Introduction to the use of IR and NMR spectroscopy for the identification of simple organic compounds. Benzene and aromatic compounds: aromaticity, electrophilic aromatic substitution, nucleophilic aromatic substitution, substituent effects. Chemistry of aldehydes and ketones: nucleophilic addition, oxidation, reduction and condensation reactions, tautomerism. Chemistry of carboxylic acids and their derivatives: Amines, basicity, reactions. Lectures and laboratory.

CHEM 231 ***Physical Chemistry I: Introduction*** (2 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; CEGEP Mathematics 203; or equivalent courses. First law of thermodynamics, thermochemistry, entropy, the second and third laws of thermodynamics, free energy and chemical equilibrium, electrochemical cells and the Nernst equation, the Gibbs-Helmholtz equation. Applications of thermodynamics to systems of chemical interest. Lectures only.

CHEM 232 ***Physical Chemistry II: Thermodynamics*** (2 credits)
Prerequisite: CHEM 231. Comparison of closed and open systems. Partial molal quantities. Chemical potential. Real gases. Fugacity. Equilibrium constant. Free-energy function. Ideal solutions. Real solutions. Duhem-Margules equation. Lectures only.
NOTE: Students who have received credit for CHEM 332 may not take this course for credit.

CHEM 233 ***Physical Chemistry III: Spectroscopy and Quantum Theory*** (2 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; CEGEP Mathematics 203; or equivalent courses. The course introduces the student to the ideas of quantum mechanics,

spectroscopy and the electronic structure of atoms and molecules. Topics include the origins and postulates of quantum theory; applications to simple systems; the hydrogen atom, the aufbau principle of the elements, simple molecules. Spectroscopy and spectroscopic measurement; simple atomic spectra; infra-red and Raman spectra of simple molecules; fluorescence; N.M.R. Lectures only.

CHEM 241 ***Inorganic Chemistry I: Introduction to Periodicity and Valence Theory*** (3 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; 203; or equivalent courses. The structure of the atom; the periodic table; properties of atoms, covalent bonding treatments including Lewis theory, valence shell electron pair repulsion theory of structure, valence bond and molecular orbital theory. Crystal field theory applied to the structure and properties of transition metal complexes. Bonding theories of metallic materials and semi-conductors.Lectures and laboratory.

CHEM 242 ***Inorganic Chemistry II: The Chemistry of the Main Group Elements*** (3 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; 203; or equivalent courses. A survey of the properties and reactions of: Hydrogen; Group IA, Lithium to Cesium; and IIA, Beryllium to Radium; including the theory of ionic bonding and structure. The descriptive chemistry of Groups IIIA, Boron to Thallium; IVB, Carbon to Lead; VB, Nitrogen to Bismuth; VIB, Sulphur to Polonium; VIIB, the Halogens; and the Chemistry of the noble gases. Lectures and laboratory.

CHEM 271 ***Introductory Biochemistry*** (3 credits)
Prerequisite: CHEM 222. An introduction to the essentials of biochemistry: protein structure, enzymology, carbohydrate metabolism and its regulation; and an overview of bioenergetics, nucleic acids and protein biosynthesis. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 371 or CHEM 372 or CHEM 373 may not take this course for credit.

CHEM 290 ***Laboratory Automation and Data Handling*** (3 credits)
Prerequisite: COMP 212, or an equivalent course in a high level computer language; CHEM 217, 218, previously or concurrently; written permission of the Department. Introduction to some modern techniques used to transduce and manipulate raw chemical data. Topics to be discussed include: statistical treatment of chemical data, using programmes written in Basic, or other high-level language; the use of binary, decimal, and hexadecimal numbers; programming a single-board computer or modern microcomputer using machine and assembly languages; input-output operations; elementary interfacing techniques. Experiments involve the collection and treatment of data from common laboratory instruments such as electrodes and photodetectors. Lectures, tutorials and laboratory.

CHEM 298 ***Selected Topics in Chemistry*** (3 credits)

CHEM 299 ***Selected Topics in Chemistry*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CHEM 302 ***Industrial Chemistry, Resources and Environment*** (2 credits)
Prerequisite: Must be registered in a Chemistry programme and be within 42 credits of graduation; or permission of the Department. An introduction to chemical engineering for chemists. Management and conservation of resources; pollution control; occupational and environmental health; technological and environmental impact assessment.

CHEM 304 ***Chemical Technology and Human Values*** (3 credits)
Prerequisite: Must be registered in a Chemistry programme and be within 42 credits of graduation; or permission of the Department. The history of technology; the impact of chemistry on material life; appropriate technologies; chemistry and war; the social responsibility of the scientist.
NOTE: Students who have received credit for CHEM 303 may not take this course for credit.

CHEM 312 ***Intermediate Analytical Chemistry*** (3 credits)
Prerequisite: CHEM 217; CHEM 218. A continuation of CHEM 217 and 218, with emphasis on instrumental methods of analysis. Emission spectroscopy; X-ray spectroscopy; voltammetry and polarography; amperometric titrations; coulometry and coulometric titrations, conductometry; chromatography with particular emphasis on gas chromatography, and high performance liquid chromatography. Laboratory is taken concurrently and provides experience in analytical techniques described in lectures. Lectures and laboratory.
NOTE: Students who have received credit for any of CHEM 310, CHEM 314, CHEM 315, or CHEM 319, may not take this course for credit.

CHEM 324 ***Organic Chemistry III: Organic Reactions*** (3 credits)
Prerequisite: CHEM 222, or equivalent; CHEM 331, previously or concurrently. A mechanistic survey of reactions of major synthetic utility. Determination of reaction mechanisms. Importance of reactive intermediates: carbocations, carbanions, radicals, and carbenes. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 322 may not take this course for credit.

CHEM 325 ***Organic Chemistry IV: Organic Structure and Stereochemistry*** (3 credits)
Prerequisite: CHEM 222, or equivalent; CHEM 331, previously or concurrently. Organic structure and

stereochemistry including the relationship of stereochemistry to physical properties and chemical reactivity. Determination of organic structure and stereochemistry by chemical and spectroscopic means. Identification of organic compounds (principally in the laboratory section). Lectures and laboratory.
NOTE: Students who have received credit for CHEM 321 may not take this course for credit.

CHEM 326 ***Natural Products*** (3 credits)
Prerequisite: CHEM 222 or equivalent. Structure determination, synthesis, and stereochemistry of various natural products. Examples from terpenes, carotenoids, steroids, alkaloids, and pheromones.
NOTE: If credit has been received for this topic under a CHEM 398 number, this course may not be taken for credit.

CHEM 327 ***Organic Chemistry of Polymers*** (3 credits)
Prerequisite: CHEM 222 or equivalent. Introduction to the fundamental aspects of polymers and polymerization. Methods of preparation, reaction mechanisms of polymer synthesis including condensation polymerization; addition polymerization: free radical, anionic, cationic; Ziegler-Natta (heterogeneous) polymerization. Lectures and problem sessions.
NOTE: Students who have received credit for CHEM C328 (1985-86) may not take this course for credit.

CHEM 328 ***Analytical Organic Chemistry and Spectroscopy*** (3 credits)
Prerequisite: CHEM 218; CHEM 222; CHEM 233. Principles of physical, chemical and instrumental methods of identification and analysis of organic compounds. "Wet" chemistry as a means of functional group identification. Protocol of identification of unknown organic compounds by chemical and spectroscopic methods. Application of vibrational, electronic, nuclear magnetic resonance and mass spectrometric techniques in the elucidation of structure of organic compounds. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 311 and CHEM 316, or CHEM 391 may not take this course for credit.

CHEM 331 ***Physical Chemistry IV: Kinetics*** (2 credits)
Prerequisite: CHEM 232. Kinetic molecular theory. Topics in chemical-reaction kinetics, including: mechanisms of elementary reactions; theories of chemical reaction rates; free-radical reactions; factors influencing rates of reactions in solution; acid-base catalysis; catalysis by enzymes; the Michaelis-Menten mechanism; inhibition in enzyme-catalyzed reactions. Lectures only.

CHEM 338 ***Physical Chemistry Laboratory I*** (2 credit)
Prerequisite: CHEM 231, previously or concurrently. Introduction to experimental procedures involved in determining basic physical properties of solids, liquids, and gases.
NOTE: Students who have credit for CHEM 238 and/or CHEM 239 may not take this course for credit.

CHEM 339 ***Physical Chemistry Laboratory II*** (2 credit)
Prerequisite: CHEM 331; CHEM 232, previously or concurrently. Investigation of some interactions that occur between solids, liquids, and gases. Kinetic and mechanistic studies of ehemical reactions.
NOTE: Students who have credit for CHEM 330 and/or CHEM 337 may not take this course for credit.

CHEM 341 ***Inorganic Chemistry III: The Transition Metals*** (3 credits)
Prerequisite: CHEM 217; CHEM 218; CHEM 241; CHEM 242. Theories of bonding in transition metal complexes, including ligand field theory, applied to structure, physical properties, and reactivity of transition metal complexes: organometallic chemistry and catalysis. Metals in Biological systems. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 342 or CHEM 348 may not take this course for credit.

CHEM 374 ***Macromolecular Synthesis*** (3 credits)
Prerequisite: CHEM 271. Synthesis of proteins, nucleic acids, lipids; synthesis and assembly of complex structures such as membranes, ribosomes, etc. Lectures and problem sessions.
NOTE: Students who have received credit for CHEM 371 or CHEM 372 or CHEM 373 may not take this course for credit.

CHEM 375 ***Intermediary Metabolism*** (3 credits)
Prerequisite: CHEM 271. A survey of selected pathways in intermediary metabolism, including their regulation and physiological significance: urea cycle, fatty acid oxidation, biosynthesis of nucleosides, tetrapyrroles and carotenoids, cholesterol and steroidal hormones. The biosynthesis of vitamins and cofactors and the metabolism of selected amino acids may also be discussed. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 371 or CHEM 372 or CHEM 373 may not take this course for credit.

CHEM 389 ***Industrial Chemical Laboratory*** (1 credit)
Prerequisite: CHEM 222; CHEM 233 or 232 previously or concurrently; or permission of the Department. A course designed to provide the student with an understanding of the philosophies of industrial quality control, and of industrial research and development. Common industrial techniques are studied, including laboratory safety; measurement of physical properties; synthetic procedures, both organic and inorganic; and various separation techniques. Several instrumental analytical methods are employed, and a final report on the work of the term is submitted. Laboratory only.

CHEM 392 ***Introductory Instrumentation*** (3 credits)
Prerequisite: CHEM 217; CHEM 218, or two 6-credit BIOL courses with laboratory. Introduction to measurement principles. Instrument design and basic techniques; analysis of amplifiers, integrators, filter circuits, and other basic modules used in chemical instrumentation. In the laboratory, transistor and IC circuits are studied, as well as some of the mechanical, optical and electrical transducers and recorders used in modern chemical instrumentation. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 390 or CHEM 397 or CHEM 399 may not take this course for credit.

CHEM 398 ***Selected Topics in Chemistry*** (3 credits)

CHEM 399 ***Selected Topics in Chemistry*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CHEM 412 ***Statistical Methods in Chemistry*** (3 credits)
Prerequisite: CHEM 218. This course studies a number of methods by which chemists analyze data, systematically collate data, and plan the efficient collection of further data. As much as possible the lectures will draw upon chemical examples, but there is not a heavy emphasis on theoretical proofs. Students are encouraged to use the statistical packages available on the University's P.C. computer network to do their assignments. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 419 ***Independent Study and Practicum*** (6 credits)
Prerequisite: Must have completed the 45-credit Core Programme, or equivalent with a GPA of 2.00 (C) or better. In collaboration with and under the direction of a member of Faculty, the student carries out independent study and practical work on a problem chosen from the student's area of concentration. The student submits a written report on the results of the work and the report is scrutinized by a committee of members of the Department.
NOTE: During the academic session before the one in which this project is to be undertaken, the student must have obtained the consent of the Department, by consultation with the CHEM 419 Coordinator, and must have also been accepted by a faculty supervisor. Independent study and practical work.

CHEM 421 ***Physical Organic Chemistry*** (3 credits)
Prerequisite: CHEM 322 or CHEM 325; CHEM 331. Determination of organic reaction mechanisms using kinetics, activation parameters, acid-base catalysis, Bronsted catalysis law, solvent effects, medium effects, isotope effects, substitutent effects and linear free energy relationships. Lectures only.

CHEM 422 ***Organic Synthesis*** (4 credits)
Prerequisite: CHEM 322 or CHEM 325. Consideration of synthetic strategy and synthesis design. Modern synthetic methods and reagents, exemplified by syntheses of terpenes, alkaloids, pheromones, and novel structures. Lectures and laboratory.

CHEM 423 ***Heterocyclic Chemistry*** (3 credits)
Prerequisite: CHEM 322 or CHEM 325. Survey of the chemistry of 3-, 4-, 5-, and 6-membered heterocyclics, with a particular emphasis on heteroaromatic systems. Synthesis and reactions of heterocyclics; their use in synthesis; factors affecting their reactivity. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 435 ***Physical Chemistry of Polymers*** (3 credits)
Prerequisite: CHEM 222; CHEM 332. Physical properties of polymers; polymer-solution theory; molecular-weight distributions and fractionation; molecular-weight determinations by colligative properties, light-scattering and ultra-centrifuge techniques; kinetics of condensation and addition polymerizations; co-polymerization. Lectures and problem sessions.
NOTE: Students who have received credit for CHEM 335 or CHEM 336 may not take this course for credit.

CHEM 441 ***Single Crystal X-Ray Diffraction*** (3 credits)
Prerequisite: CHEM 325. Space group symmetry. Diffraction of X-rays by single crystals. Photographic and counter methods of diffraction data collection. Solution and refinement and crystal structures. Interpretation of atomic coordinates and vibrations. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 442 ***Physical Methods in Inorganic Chemistry*** (3 credits)
Prerequisite: CHEM 341; CHEM 328 previously or concurrently. Introduction to symmetry and the character tables. Diffraction methods, X-ray, ESCA, UV-Visible, ORD and CD, EPR, Moessbauer, NQR, NMR, IR, and Raman. Lectures only.

CHEM 444 ***Mossbauer Spectroscopy and Magnetic Properties of Materials*** (3 credits)
Prerequisite: CHEM 241, CHEM 242 and CHEM 341, previously or concurrently. Introduction to the

crystalline state, X-ray and neutron diffraction; vibrational properties of solids, phonons; magnetic properties of materials: diamagnetism, paramagnetism, ferromagnetism, antiferromagnetism, ferrimagnetism and other ordered states; theory of the Mossbauer effect, hyperfine interactions; Mossbauer spectroscopy, techniques, applications; examples of Mossbauer studies: iron, tin, other main group elements, other transition elements, lanthanides and actinides; combined studies of solids by X-ray and neutron diffraction, magnetic measurements and Mossbauer spectroscopy. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 445 ***Heterogeneous Catalysis*** (3 credits)
Prerequisite: CHEM 231. Surface phenomena in heterogeneous catalysis (adsorption; texture of solids; introduction to the main techniques for the characterization of catalysts). Relationships between surface properties and catalyst activities (basic concepts in Catalysis). Catalytic kinetics. Catalytic reaction systems (introduction to the theory of catalytic reactors; diffusion, heat and mass transfer within porous solids; shape selectivity, catalyst activity decay). Industrial Catalysis; new trends. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 446 ***Basic Electrochemistry*** (3 credits)
Prerequisite: CHEM 231, CHEM 331 or permission of the Department. This course covers a specialized area in physical and analytical chemistry and, in particular, develops concepts introduced in CHEM 211 and CHEM 312. The theory behind these concepts is further described to explain the principles of corrosion and battery research and development. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 447 ***Electronic Spectroscopy*** (3 credits)
Prerequisite: CHEM 233; CHEM 341. This course is intended to provide the student with the theoretical background necessary to understand and work with electronic spectra, to illustrate and discuss the methods involved in assigning spectral transitions, and to explain states and symmetries. The course assumes that the student has some knowledge of atomic structure, molecular symmetry and group theory. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 449 ***Laboratory in Synthesis and Techniques in Inorganic Chemistry*** (1 credit)
Prerequisite: CHEM 442, previously or concurrently. Some of the techniques discussed in CHEM 442 are employed in the laboratory to characterize and determine properties of compounds synthesized at the laboratory bench. Laboratory only.

CHEM 450 ***Research Project and Thesis*** (6 credits)
Prerequisite: 60 credits including the 45-credit Core Programme, or equivalent and enrolment in Honours in Chemistry or permission of the Department. By Departmental decision, such permission is only given if the student has a G.P.A. of 3.0 or better, for all courses in this programme. The student works on a research project in the student's area of concentration, selected in consultation with and conducted under the supervision of a faculty member of the Department, and writes a thesis on the results. The project is also the subject of a seminar before the Department.
NOTE: During the academic session before the one in which this projet is to be undertaken, the student must have obtained the consent of the Department, by consultation with the CHEM 450 Coordinator, and must have also been accepted by a faculty supervisor.

CHEM 471 ***Enzyme Kinetics and Mechanism*** (3 credits)
Prerequisite: CHEM 271; 60 credits. Steady-state kinetics, including the use of initial velocity studies and product inhibition to establish a kinetic mechanism; non-steady-state kinetics, isotope effects, energy of activation, etc; detailed mechanisms of selected enzymes. Lectures only.

CHEM 472 ***Chemical Toxicology*** (3 credits)
Prerequisite: CHEM 271; 60 credits or permission of the Department. Introduction to the general principles of toxicology with emphasis on the toxic effects of chemicals in humans. Dose-response relationship, types and routes of exposure, absorption and disposition of toxic substances, toxicokinetics, types of toxic response and factors affecting toxic response. Toxicity testing, risk assessment and interpretation of toxicological data. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 473 ***Medicinal Chemistry I*** (3 credits)
Prerequisite: CHEM 271; 60 credits. Physicochemical principles of drug action. Influence of solubility, surface phenomena, stereochemistry and electronic properties on drug action. Nonspecific drugs, anaesthetics, membrane-active disinfectants and antibiotics. Quantitative structure-activity relationships. Receptor theory and models, methods of receptor characterization. Lectures only.

CHEM 474 ***Medicinal Chemistry II*** (3 credits)
Prerequisite: CHEM 473 or permission of the Department. Drugs acting on endogenous messengers and

their targets: Cholinergic, adrenergic, dopaminergic and serotoninergic neuronal systems. Histamine, amino acid neurotransmitters. Steroid and peptide hormones, prostaglandins. Enzymes as drug receptors. Drug design. Lectures only.

CHEM 475 ***Pharmacology I*** (3 credits)
Prerequisite: CHEM 271; BIOL 333. Pharmacokinetics, drug metabolism and interaction. Toxicology, carcinogenecity, and teratogenecity. Drug development and testing. Lectures only.

CHEM 476 ***Pharmacology II*** (3 credits)
Prerequisite: CHEM 475 or permission of the Department. Autonomic nervous system pharmacology. Functions of central nervous system, depressants, stimulants. Narcotic analgesics, addiction. Cardiovascular, renal, and endocrine pharmacology. Lectures only.

CHEM 478 ***Hormone Biochemistry*** (3 credits)
Prerequisite: CHEM 271 and third-year standing. This course deals with an in-depth study of the vertebrate hormones and involves a study of the precise chemical structure and properties of each hormone, its biosynthesis and mode of secretion from the cell. The circulating form of the hormone is examined, as well as the nature of the hormone receptor. The cellular mechanism of action and the relationship of the hormone's action to the intact animal are investigated. Lectures only.

CHEM 479 ***Advanced Biochemistry Laboratory*** (3 credits)
Prerequisite: Must have a grade of C- (grade point of 1.70 in each course) or better, in 31 credits of the 45-credit Core Programme. This course deals with the theory and practice of modern biochemical laboratory techniques. Laboratory only.

CHEM 481 ***Bioinorganic Chemistry*** (3 credits)
Prerequisite: CHEM 271; CHEM 241. Role of metals in biochemical systems. Essential trace elements, zinc enzymes, oxygen transport and storage, metalloproteins and biological electron transfer, structure-function relationships in heme enzymes, nitrogen fixation; model compounds for metalloproteins and metalloenzymes. Lectures only.

CHEM 482 ***Properties and Models of the Solid State*** (3 credits)
Prerequisite: CHEM 232; CHEM 328; or permission of the Department; 60 credits. Crystal structure and the reciprocal lattice; lattice dynamics; free electron theory; band theory; semiconductors; dielectric and magnetic properties of solids. Lectures only.

CHEM 491 ***Advanced Instrumentation*** (4 credits)
Prerequisite: CHEM 392. A study of the amplifiers, transducers, and other circuit elements used to acquire data in chemistry, in the analog, time, and digital data domains. A study of these circuits as regards optimization, frequency response, sampling parameters, signal-to-noise enhancement and budget error analysis. Some of the concepts involved in computer interfacing, for both control and data collection, are discussed. In the laboratory, selected experiments illustrate the topics discussed in lectures. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 490 or CHEM 497 or CHEM 499 may not take this course for credit.

CHEM 492 ***Chemical Spectroscopy*** (4 credits)
Prerequisite: CHEM 321 or CHEM 324; CHEM 328. Theory and application of EPR spectroscopy, rotational spectroscopy, rotation-vibrational spectroscopy, Raman spectroscopy. Lectures and laboratory.

CHEM 493 ***Magnetic Resonance Spectroscopy*** (3 credits)
Prerequisite: CHEM 221 or equivalent. This course is designed to provide the background in magnetic resonance theory necessary to understand modern high-resolution NMR experiments and instrumentation. The basic theory in the introductory section also applies to electron spin resonance (ESR). Relaxation and through-bond and through-space interactions, and experiments to investigate them are considered. Spin manipulations and behaviour in multiple-pulse, Fourier transform NMR techniques used for common spectral editing and two-dimensional experiments are discussed. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 494 ***Mass Spectrometry*** (3 credits)
Prerequisite: CHEM 331. Production and interpretation of mass spectra. Topics include: ionization methods (electron impact, chemical ionization and fast-atom bombardment); interpretation of mass spectra; introduction to quantitative analysis by mass spectrometry. Lectures only.
NOTE: If credit has been received for this topic under a CHEM 498 number, this course may not be taken for credit.

CHEM 498 ***Advanced Topics in Chemistry*** (3 credits)

CHEM 499 ***Advanced Topics in Chemistry*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.060 Classics

Chair
EILEEN M. PRESTON, *Associate Professor*

Associate Professors
DANIEL BROWN
LIONEL SANDERS

Assistant Professor
CATHERINE BOLTON

The Department offers programmes in Classical Philology, Classical Studies and Classical Archaeology.

Programmes in Classical Philology require competence in Ancient Greek and Latin and are directed towards an understanding and appreciation of classical languages and literature.

Programmes in Classical Studies do not require an exhaustive knowledge of Greek and Latin, but are concerned with a broadly based study of ancient society.

The Honours programme in Classical Philology provides the background necessary for the most specialized studies in Greek and Latin at the graduate level.

Students in the Honours programme in Classical Studies should inform themselves well in advance of the level of competence in classical languages required for admission to graduate programmes in Classical Studies.

Major programmes in Classics are not designed to prepare students for further specialized study. They provide an excellent liberal education and may be very effectively combined with programmes in other fields, especially in the Humanities. The Minor programmes provide a basic exposure to the field and are designed to complement other programmes.

Most courses are open as electives to students in other departments.

Students must consult the Department Chair to select the courses in their programmes. For details on suggested programmes, see the Classics Course Guide. Students are advised to refer to the Undergraduate Class Schedule for the campus where individual courses will be offered.

Students who already had Honours status by June 1, 1977 continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar).

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

72 BA Honours in Classical Philology
Stage I
18 CLAS 240^3, 242^3, 280^6, 290^6
Stage II
6 Chosen from CLAS 211^3, 212^3, 326^3, 327^3
12 CLAS 380^6 and 390^6
Stage III
18 Credits of Greek selected from CLAS 480^6, 481^6, 482^6, 483^6, 484^6, 485^6, 486^6, 498^3, 499^6
18 Credits of Latin selected from CLAS 490^6, 491^6, 492^6, 493^6, 495^3, 496^3, 498^3, 499^6

42 BA Major in Classical Philology
Stage I
18 CLAS 211^3, 212^3, 280^6, 290^6
Stage II
18 CLAS 240^3, 242^3, 380^6, 390^6
Stage III
6 Credits of Latin or Greek at the advanced level

24 Minor in Classical Philology
24 Credits in either Greek and/or Latin

48 BA Major in Latin and Classical Studies
Stage I
15 CLAS 211^3, 212^3, 242^3, 290^6
Stage II
15 CLAS 343^3, 366^3, 367^3, 390^6
6 Chosen from CLAS 261^3, 280^6, 323^3, 325^3, 355^3
Stage III
6 Credits in Latin prose chosen from CLAS 490^6, 491^6, 495^3, 498^3
6 Credits in Latin poetry chosen from CLAS 492^6, 493^6, 496^3, 498^3

60 BA Honours in Classical Studies
Stage I
12 CLAS 211^3, 212^3, 240^3, 242^3
6 Chosen from CLAS 280^6, 290^6
Stage II
9 Chosen from CLAS 230^3, 261^3, 262^3, 266^3, 267^3, 298^3, 299^6
6 Chosen from CLAS 280^6, 290^6
Stage III
27 Chosen from CLAS 323^3, 324^3, 325^3, 326^3, 327^3, 341^3, 343^3, 354^3, 355^3, 364^3, 365^3, 366^3, 367^3, 380^6, 390^6, 398^3, 399^6, 498^3, 499^6; ARTH 360^3, 361^3; PHIL 310^6
Courses in Greek and Latin at the 400 level

60 BA Specialization in Classical Studies
Stage I
12 CLAS 211^3, 212^3, 240^3, 242^3
Stage II
12 Chosen from CLAS 230^3, 261^3, 262^3, 266^3, 267^3, 280^6, 290^6, 298^3, 299^6

Stage III

36 Chosen from CLAS 323^3, 324^3, 325^3, 326^3, 327^3, 341^3, 343^3, 354^3, 355^3, 364^3, 365^3, 366^3, 367^3, 380^6, 390^6, 398^3, 399^6, 498^3, 499^6; ARTH 360^3, 361^3; PHIL 310^6
Courses in Greek and Latin at the 400 level

42 BA Major in Classical Studies

Stage I

12 CLAS 211^3, 212^3, 240^3, 242^3

Stage II

15 Chosen from CLAS 230^3, 261^3, 262^3, 266^3, 267^3, 280^6, 290^6, 298^3, 299^6

Stage III

15 Chosen from CLAS 323^3, 324^3, 325^3, 326^3, 327^3, 341^3, 343^3, 354^3, 355^3, 364^3, 365^3, 366^3, 367^3, 380^6, 390^6, 398^3, 399^6, 498^3, 499^6; ARTH 360^3, 361^3; PHIL 310^6

24 Minor in Classical Studies

6 CLAS 211^3, 212^3

6 Chosen from CLAS 240^3, 242^3, 341^3

12 Chosen from CLAS 261^3, 262^3, 266^3, 267^3, 280^6, 290^6, 298^3, 299^6, 324^3, 325^3, 326^3, 327^3, 343^3, 398^3, 399^6

24 Minor in Classical Archaeology

6 CLAS 266^3, 267^3

12 Either CLAS 240^3, 341^3, 364^3, 365^3, or CLAS 242^3, 343^3, 366^3, 367^3

6 Chosen, with the approval of the Department, from courses in Classics or Art History, or from field-work courses in Archaeology credited by other institutions.

GROUP 1: CLASSICAL STUDIES

A. Literature

CLAS 211 The Beginnings of European Literature I (Greek Literature) (3 credits)
CLAS 212 The Beginnings of European Literature II (Roman Literature) (3 credits)
CLAS 323 Roman Satire (3 credits)
CLAS 324 Greek Epic (3 credits)
CLAS 325 Roman Epic (3 credits)
CLAS 326 Greek and Roman Drama I (3 credits)
CLAS 327 Greek and Roman Drama II (3 credits)

B. History

CLAS 230 (also given as HIST 219) The Ancient Near East (3 credits)
CLAS 240 (also given as HIST 223) Greek History I (3 credits)
CLAS 242 (also given as HIST 225) History of the Roman Republic (3 credits)
CLAS 341 (also given as HIST 323) Greek History II (3 credits)
CLAS 343 (also given as HIST 327) History of the Roman Empire (3 credits)

C. Culture & Civilization

CLAS 261 Mythology I (3 credits)
CLAS 262 Mythology II (3 credits)
CLAS 354 Women in Classical Antiquity I (3 credits)
CLAS 355 Women in Classical Antiquity II (3 credits)

D. Archaeology

CLAS 266 An Introduction to Classical Archaeology (3 credits)
CLAS 267 The Archaeology of the Greek Bronze Age (3 credits)
CLAS 364 Classical Greek Art and Archaeology (3 credits)
CLAS 365 Art and Archaeology of the Hellenistic Age (3 credits)
CLAS 366 Etruscan and Roman Republican Art and Archaeology (3 credits)
CLAS 367 Roman Imperial Art and Archaeology (3 credits)

GROUP 2: CLASSICAL PHILOLOGY

A. Classical Greek

CLAS 280 Elementary Classical Greek (6 credits)
CLAS 380 Intermediate Classical Greek (6 credits)
CLAS 480 Greek Historians (6 credits)
CLAS 481 Plato (6 credits)
CLAS 482 Homer (6 credits)
CLAS 483 Greek Tragedians (6 credits)
CLAS 485 Greek Comedy (6 credits)
CLAS 486 Pindar (6 credits)

B. Latin

CLAS 290 Elementary Latin (6 credits)
CLAS 390 Intermediate Latin (6 credits)
CLAS 490 Roman Historians (6 credits)
CLAS 491 Cicero (6 credits)
CLAS 492 Roman Poetry I (6 credits)
CLAS 493 Roman Poetry II (6 credits)
CLAS 495 Roman Comedy (3 credits)
CLAS 496 Latin Satire (3 credits)

GROUP 3: SPECIAL COURSES (EITHER PHILOLOGY OR CLASSICAL STUDIES)

CLAS 298	Selected Topics in Classics	(3 credits)
CLAS 299	Selected Topics in Classics	(6 credits)
CLAS 398	Selected Topics in Classics	(3 credits)
CLAS 399	Selected Topics in Classics	(6 credits)
CLAS 498	Advanced Topics in Classics	(3 credits)
CLAS 499	Advanced Topics in Classics	(6 credits)

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

CLAS 211 ***The Beginnings of European Literature I (Greek Literature)*** (3 credits)
The Greek background of European literature. Selections from Homer, the Greek dramatists, Plato and Aristotle.

CLAS 212 ***The Beginnings of European Literature II (Roman Literature)*** (3 credits)
The Roman background of European literature. Selections from Lucretius, Catullus, Cicero, Virgil, Horace, Ovid, Seneca and Juvenal.

CLAS 230 ***(also given as HIST 219) Ancient Near East*** (3 credits)
The emergence of the world's earliest civilizations from the Neolithic cultures of Ancient Mesopotamia and Egypt. The continuing history of the Fertile Crescent to the end of the Bronze Age. The Near Eastern origins of Bronze Age Crete and Greece.

CLAS 240 ***(also given as HIST 223) Greek History I*** (3 credits)
A political, social, economic and cultural history of Greece from Minoan-Mycenaean times to the end of Classical Greek civilization in the fourth-century B.C., with special emphasis placed upon Athens.

CLAS 242 ***(also given as HIST 225) History of the Roman Republic*** (3 credits)
A political, social, economic and cultural history of Rome from the City's origins to the establishment of the Roman Empire under the Emperor Augustus.

CLAS 261 ***Mythology I*** (3 credits)
A survey of myths and mythological figures as recorded in ancient Greek literary sources and art.
NOTE: Students who have received credit for CLAS C260 may not take this course for credit.

CLAS 262 ***Mythology II*** (3 credits)
An examination of the universal features and recurrent patterns in the Mesopotamian, Egyptian, Greek and Roman mythologies.
NOTE: Students who have received credit for CLAS C260 may not take this course for credit.

CLAS 266 ***An Introduction to Classical Archaeology*** (3 credits)
This course is a prerequisite for all further courses in Classical Archaeology. It includes a survey of the history of Classical Archaeology as well as an introduction to modern excavation techniques such as palynology, dendrochronology and radio-carbon dating. Further, the salient diagnostic characteristics of the principal divisions of greek and Roman art and architecture are presented for examination and analysis. The course thus stresses the identification of representative artifacts with regard to date, provenance, purpose, derivation, and tradition.
NOTE: Students who have received credit for CLAS C264/HIST C227 may not take this course for credit.

CLAS 267 ***The Archaeology of the Greek Bronze Age*** (3 credits)
Prerequisite: CLAS 266. The Bronze Age in Mainland Greece, Crete and the Greek Islands.
NOTE: Students who have received credit for CLAS C265/HIST C229 may not take this course for credit.

CLAS 280 ***Elementary Classical Greek*** (6 credits)
A course in the fundamentals of the grammar and syntax of ancient Greek.

CLAS 290 ***Elementary Latin*** (6 credits)
A course in the fundamentals of Latin grammar and syntax.

CLAS 298 ***Selected Topics in Classics*** (3 credits)

CLAS 299 ***Selected Topics in Classics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CLAS 323 ***Roman Satire*** (3 credits)
A study of the satiric genre, its birth and development in Roman literature and its connection with the early novel as seen in the English translations of the works of Horace, Juvenal, Petronius, Persius, Seneca and Apuleius.
NOTE: Students who have received credit for CLAS C223 may not take this course for credit.

CLAS 324 ***Greek Epic*** (3 credits)
A study of the *Iliad* and *Odyssey* of Homer and of the development of Greek epic.
NOTE: Students who have received credit for CLAS C224 may not take this course for credit.

CLAS 325 ***Roman Epic*** (3 credits)
Study of the *Aeneid* of Virgil and of the development of Roman epic.
NOTE: Students who have received credit for CLAS C225 may not take this course for credit.

CLAS 326 ***Greek and Roman Drama I*** (3 credits)
A study of the origins and growth of Attic Tragedy with a close examination of plays of Aeschylus and Sophocles.
NOTE: Students who have received credit for CLAS C220 or C320 may not take this course for credit.

CLAS 327 ***Greek and Roman Drama II*** (3 credits)
Prerequisite: CLAS 326. A continued study of the development of Greek Tragedy as seen in plays of Euripides. The origins and growth of Greek Comedy as seen in plays of Aristophanes and Menander. The influence of classical Greek drama on the Roman playwrights Plautus, Terence and Seneca and on European drama.
NOTE: Students who have received credit for CLAS C220 or C320 may not take this course for credit.

CLAS 341 ***(also given as HIST 323) Greek History II*** (3 credits)
A political, social, economic and cultural history of the Greek world from Alexander the Great to the Roman conquest of Greece in 146 B.C.
NOTE: Students who have received credit for CLAS 241/HIST 224 may not take this course for credit.

CLAS 343 ***(also given as HIST 327) History of the Roman Empire*** (3 credits)
A political, social, economic and cultural history of the Roman Empire from Augustus to the end of the Roman Empire in the West.
NOTE: Students who have received credit for CLAS 243/HIST 226 may not take this course for credit.

CLAS 354 ***Women in Classical Antiquity I*** (3 credits)
An examination of the status and the role of women in pre-historic, archaic and classical Greek societies.
NOTE: Students who have received credit for CLAS 254 may not take this course for credit.

CLAS 355 ***Women in Classical Antiquity II*** (3 credits)
An examination of the status and the role of women in the Hellenistic and Roman worlds.
NOTE: Students who have received credit for CLAS 254 may not take this course for credit.

CLAS 364 ***Classical Greek Art and Archaeology*** (3 credits)
Prerequisite: CLAS 266. The art and architecture of the Greek world from 900 to 323 B.C. A study of the geometric, archaic and classical periods with particular attention to painting (especially ceramics), sculpture, and architecture. Some work is done at the Montréal Museum of Fine Arts.

CLAS 365 ***Art and Archaeology of the Hellenistic Age*** (3 credits)
Prerequisite: CLAS 266. The art and architecture of the Greek world after the death of Alexander the Great. Hellenistic aestheticism, synthesis of oriental and Greek tradition in the visual arts. Impact of Hellenistic art on Rome.

CLAS 366 ***Etruscan and Roman Republican Art and Archaeology*** (3 credits)
Prerequisite: CLAS 266. A survey of Neolithic, Bronze, and early Iron Age cultures in Italy. Etruscan civilization and the coming of the Greeks. The archaeological reconstruction of the city of Rome in the Republican period. Some work is done at the Montréal Museum of Fine Arts.

CLAS 367 ***Roman Imperial Art and Archaeology*** (3 credits)
Prerequisite: CLAS 266. Development of Roman art and architecture from Augustus to the late Roman Empire. Roads, fortifications, aqueducts, theatres, porticos, monuments, baths and basilicas. Pompeii and Herculaneum. Special emphasis on Roman Britain.

CLAS 380 ***Intermediate Classical Greek*** (6 credits)
Prerequisite: CLAS 280, or equivalent. Training in the acquisition of a reading command of the language. Readings from Plato, Xenophon and others.

CLAS 390 ***Intermediate Latin*** (6 credits)
Prerequisite: CLAS 290 or equivalent. Training in the acquisition of a reading command of the language. Readings from authors such as Cicero, Catullus, Pliny and Seneca.

CLAS 398 ***Selected Topics in Classics*** (3 credits)

CLAS 399 ***Selected Topics in Classics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

CLAS 480 ***Greek Historians*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from Herodotus and Thucydides.

CLAS 481 ***Plato*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from *The Republic,* and other major dialogues.

CLAS 482 ***Homer*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from the *Iliad* and the *Odyssey.*

CLAS 483 ***Greek Tragedians*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from Aeschylus, Sophocles and Euripides.

CLAS 484 ***Greek Orators*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from Demosthenes and other Attic orators.

CLAS 485 ***Greek Comedy*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from Aristophanes and Menander.

CLAS 486 ***Pindar*** (6 credits)
Prerequisite: CLAS 380 or equivalent. Readings in Greek from Pindar and the lyric poets.

CLAS 490 ***Roman Historians*** (6 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Sallust, Livy and Tacitus.

CLAS 491 ***Cicero*** (6 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Cicero.

CLAS 492 ***Roman Poetry I*** (6 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Horace and Virgil.

CLAS 493 ***Roman Poetry II*** (6 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Ovid and Lucretius.

CLAS 495 ***Roman Comedy*** (3 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Plautus and Terence.

CLAS 496 ***Latin Satire*** (3 credits)
Prerequisite: CLAS 390 or equivalent. Readings in Latin from Juvenal, Petronius, Persius and Seneca.

CLAS 498 ***Advanced Topics in Classics*** (3 credits)

CLAS 499 ***Advanced Topics in Classics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.070 Communication Studies

Acting Chair
BRIAN LEWIS, *Associate Professor*

Professors Emeriti
JOHN BUELL
JOHN E. O'BRIEN, s.j.

Professors
MARC GERVAIS, s.j.
DOV SHINAR
GAIL VALASKAKIS

Associate Professors
MARTIN ALLOR
WILLIAM BUXTON
MAURICE CHARLAND
DENIS DINIACOPOULOS
W. LAMBERT GARDINER
WILLIAM GILSDORF
RICHARD HANCOX
TILLY JANOWITZ-GECSEI
THOMAS KOVATS
NIKOS METALLINOS
DENNIS MURPHY
DONAT J. TADDEO

Assistant Professors
JODY BERLAND
SCOTT EASTHAM
HAL THWAITES

Lecturers
GILBERT DE NOBILE
KIM SAWCHUK

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

The Department offers two programmes of study, and two others jointly with Journalism.

a) *Bachelor of Arts, Specialization in Communication Studies:* consisting of 60 credits in Communication Studies and 30 credits from electives outside the Department.

b) *Bachelor of Arts, Major in Communication Studies:* consisting of 42 credits in Communication Studies and 48 credits from electives outside the Department.

c) *Bachelor of Arts, Specialization in Communication and Journalism:* consisting of 60 credits in Communication and Journalism courses and 30 credits from electives outside Communication and Journalism.

d) *Bachelor of Arts, Specialization in Broadcast Journalism:* consisting of 60 credits in Communication and Journalism courses and 30 credits from electives outside Communication and Journalism. This programme was first offered in 1981-82.

Elective credits are understood as courses taken in other departments or faculties of the University. Credits in Communication Studies or Journalism, or in Cinema (Faculty of Fine Arts) may not be used in lieu of electives.

200-level courses are normally taken in first year, 300-level courses in second year, 400-level courses in third year.

Written work may be required in English for courses in Journalism; please consult the Department.

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 - Programmes and Admission Requirements - Profiles).

60 BA Specialization in Communication Studies

18	COMS 230^3, 240^3, 255^3, 275^3, 278^3, 284^3
6-18	Chosen from courses in Cluster I*
24-36	Chosen from courses in Cluster II-V with at least 3 credits from each Cluster at the 300 or 400 level

**No more than one course from Cluster I may be done concurrently.*

42 BA Major in Communication Studies

18	COMS 230^3, 240^3, 255^3, 275^3, 278^3, 284^3
6-12	Chosen from courses in Cluster I*
12-18	Chosen from courses in Cluster II-V with at least 3 credits from each Cluster at the 300 or 400 level

**No more than one course from Cluster I may be done concurrently.*

60 BA Specialization in Communication and Journalism

NOTE: Students must meet the admission requirements of both the Departments of Communication Studies and Journalism. This programme is designed to prepare graduates for the English-language media.

Stage I

9	JOUR 201^6, COMS 240^3
6	Chosen from COMS 275^3, 278^3, 284^3

Stages II & III

9	JOUR 302^3, 303^3, 310^3
6	JOUR 400^3, 446^3
3	Chosen from JOUR 402^3, 404^3, 415^3, 430^3
6	Other Journalism credits - these may not be laboratory/workshop courses
21	Chosen from Communication Clusters I, III, IV, V, at the 300 or 400 level, with a maximum of 6 credits from Cluster I.

60 **BA Specialization in Broadcast Journalism**

NOTE: Students must meet the admission requirements of both the Departments of Communication Studies and Journalism. This programme is designed to prepare graduates for the English-language media.

Stage I

15 JOUR 201[6], COMS 240[3], 278[3], 284[3]

3 Chosen from JOUR 205[3], 210[3], 215[3]

Stage II

12 JOUR 302[3], 306[3], 310[3], 343[3]

6 Chosen from COMS 378[6], 381[6], 387[6]

Stage III

6 JOUR 415[3], 446[3]

3 Chosen from JOUR 420[3] or 430[3]

15 Chosen from Communication clusters III, IV, and V at the 300 or 400 level.

Department Objectives

The Department of Communication Studies was founded in 1965 (as Communication Arts), the first at a Canadian university.

The Department's programmes are generalist in nature and take a *broad approach* to the study of media and communication in today's world. Of primary concern is a humanistic understanding, a value-oriented appreciation of the role of mass media in society. Programmes intend to develop the student's critical judgment and creative potential by both theoretical and practical work.

Each of the Department's programmes has three basic components: 1) a humanities and liberal arts emphasis; 2) a social-science and research emphasis; 3) a creative laboratory-experience emphasis.

Graduates of the Department's programmes have found careers in: 1) Radio, Television, Broadcast Journalism; 2) Film, other media industries, media departments of business; 3) Small media firms and free-lance media work; 4) Educational institutions (teaching, A/V services); 5) Advertising, Public Relations, Promotion, Marketing, Sales, Information, etc.; 6) Advanced studies and research; 7) Other professions, and government services.

Facilities

The Department has two television studios equipped with colour videocassette recording and editing facilities, two 3/4" colour video portapak units, 9 x 16mm film units, 16mm sync and editing units, and complete super 8mm film units; photographic laboratories; a holographic and laser laboratory; multiple sound facilities; a research studio for the measurement of visual and audio-information loads, an electronic and electro-mechanical programmer for multi-media use; and a Learning Centre with audio-slide film-video terminals for independent study.

Department Admission Requirements

The number of students that can be accommodated every year in our department is physically limited by the room available in labs, the amount of equipment and the number of professors. Approximately 120 students are admitted every year, giving a student population of about 300 in the three years of our undergraduate programme. Applications consistently outnumber the department's capacity. For this reason, the Department of Communication Studies has a distinct admission procedure, in addition to the normal admission process of Concordia University.

The Department is prepared to receive applications as early as October, and to arrange interviews, for the following academic year. Interested candidates should obtain information about admission requirements of Communication Studies by contacting the Admissions Committee, Department of Communication Studies, Loyola Campus, Concordia University, 7141 Sherbrooke Street West, Montréal, Québec. H4B 1R6. Telephone: (514) 848-2555.

Graduate Work in Communication Studies

The Department also offers a one-year diploma programme for students who have completed their undergraduate degree in another field and an MA in Media Studies for those with two years of media experience and academic work in Communications. A PhD in Communications is offered jointly with Université de Montréal and UQAM. For details, please refer to the Graduate Calendar or contact the Department.

CLUSTERS:

I. Laboratory

COMS 275	Visual Dynamics I (3 credits)
COMS 278	Seminar and Practicum in Sound I (3 credits)
COMS 284	Seminar and Practicum in Film and Video I (3 credits)
COMS 374	Visual Dynamics II (6 credits)
COMS 375	Visual Dynamics III (6 credits)
COMS 378	Seminar and Practicum in Sound II (6 credits)
COMS 381	Seminar and Practicum in Film II (6 credits)
COMS 387	Seminar and Practicum in Television II (6 credits)
COMS 475	Visual Dynamics IV (6 credits)
COMS 478	Seminar and Practicum in Sound III (6 credits)
COMS 481	Seminar and Practicum in Film III (6 credits)
COMS 487	Seminar and Practicum in Television III (6 credits)
COMS 490	Communication Programming (6 credits)

II. Seminar/Practicum

COMS 230	Basic Writing for the Media (3 credits)
COMS 255	Communication Analysis of Environment (3 credits)
COMS 305	Advanced Script-Writing for Film (6 credits)
COMS 330	Advanced Script-Writing for Television (6 credits)

COMS 351 Biocybernetic Research (6 credits)
COMS 355 Media Computer Applications I (3 credits)
COMS 356 Media Computer Applications II (3 credits)
COMS 470 Advertising and the Consumer Society (3 credits)
COMS 471 Public Relations: Principles and Problems (3 credits)

III. Media Study

COMS 306 Documentary Film (3 credits)
COMS 307 Hollywood in the Silent Era (3 credits)
COMS 308 The German Expressionist Movement (3 credits)
COMS 309 The Revolutionary Soviet Cinema (3 credits)
COMS 310 The Hollywood Genres (3 credits)
COMS 311 The Classic French Cinema (3 credits)
COMS 312 La Nouvelle Vague (3 credits)
COMS 313 Ingmar Bergman and The Scandinavians (3 credits)
COMS 314 The Italians, from Neo-Realism to Today (3 credits)
COMS 315 Shakespeare in the Cinema (3 credits)
COMS 316 The Canadian Cinema (3 credits)
COMS 317 Film Studies (3 credits)
COMS 320 Media Styles, Modes, and Carriers (3 credits)
COMS 321 History of Media Carriers (3 credits)
COMS 331 Documentary Television (3 credits)
COMS 416 Film Criticism (3 credits)
COMS 417 Film Ideas (3 credits)
COMS 435 Documentary Film and Television Genres I (3 credits)
COMS 436 Documentary Film and Television Genres II (3 credits)

IV. Media and Society

COMS 352 Broadcast Policy in Canada (3 credits)
COMS 360 Mass Communication (3 credits)
COMS 361 Seminar in Propaganda (3 credits)
COMS 437 Seminar in Media Forecast (3 credits)
COMS 444 Television Aesthetics I (3 credits)
COMS 445 Television Aesthetics II (3 credits)
COMS 454 Communication Law and Administration I (3 credits)
COMS 455 Communication Law and Administration II (3 credits)
COMS 460 Political Communication (3 credits)
COMS 461 Organizational Communication (3 credits)
COMS 468 Theoretical Issues in Development Communications (3 credits)
COMS 469 Media Applications to Participatory Development (3 credits)

V. Communication and Media Theory

COMS 240 Communication Theory (3 credits)
COMS 322 Media and Media Culture (3 credits)
COMS 323 Media Theory (3 credits)
COMS 362 Psychology of Communication (3 credits)
COMS 364 Communications and the Canadian North (3 credits)
COMS 366 Interpersonal Communication and Cultural Context (3 credits)
COMS 367 Media and Cultural Context (3 credits)
COMS 462 Communication, Culture, and Popular Art (3 credits)
COMS 463 Semiotics (3 credits)

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

COMS 230 ***Basic Writing for the Media*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. This course is designed to provide knowledge of and practice in the special written forms and formats utilized by the media. Assignments are practically oriented toward possible student productions.

COMS 240 ***Communication Theory*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Through lectures, discussions, and selected readings from the works of key theoreticians, this course introduces students to major approaches to the understanding of the process of communication.

COMS 255 ***Communication Analysis of Environment*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. General and detailed analysis of various information complexes; e.g., museums, galleries, exhibitions, countrysides, landscapes, city streets, highways, department stores, churches, etc., from the point of information values used to influence future prospective audiences of films, television programmes, or exhibition and theatre visitors. The basic values of light, space, sound, picture, words, and exhibit structures are explored through individual student projects in real locations. Students work on individual projects under the supervision of the directing professor. Tutorial course.

COMS 275 ***Visual Dynamics I*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. In this course, students are led to discover fundamental laws which underlie visual representation. The overall method consists of basic experiments in vision and perception: to explore distances, planes, tones, colour, light, etc. Photography is the medium by which these experiments are recorded for observation and discussion. Lectures and Laboratory: average 6 hours per week.

COMS 278 ***Seminar and Practicum in Sound I*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. This course is designed to provide the student with a basic working knowledge of audio systems both natural and electronic, to understand the various affective and psychological qualities of sound, and how sound may be structured into imaginative aural forms. Lectures and Laboratory: average 6 hours per week.

COMS 284 ***Seminar and Practicum in Film and Video I*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. A practical approach to an understanding of the common elements of film and video media, and of the specific differences inherent in their effective use. Course methodology includes lectures, screenings, readings, portapak video and Super 8mm film productions. Lectures and Laboratory: average 6 hours per week.

COMS 298 ***Selected Topics in Communication Studies*** (3 credits)

COMS 299 ***Selected Topics in Communication Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

COMS 305 ***Advanced Script-Writing for Film*** (6 credits)
Prerequisite: Registration in a Communication Studies programme; submission of a qualifying assignment by July 1st and subsequent approval of instructor. This assignment, which varies from year to year, is intended to test the student's writing ability and creative imagination. A practical course in writing film-drama: story construction and plotting, scene-making, characterization and character development, dialogue, dramatic continuity, timing, pacing, rhythm, suspense, and creative criticality. Many of these fictional and dramatic techniques are, as the occasion arises, applied to non-fictional scripts as well. The method consists of lecture, discussion, demonstration, critique. Assignments are on-going.

COMS 306 ***Documentary Film*** (3 credits)
Prerequisite: 30 credits; open to all University students; written permission of the Department. A survey of the documentary film field from 1895 until today, with an examination of major styles (Romantic, Realistic, Expressionistic, Avant-Garde, etc.) in the works of significant documentary filmmakers. The method consists of lecture, screenings, critique, and discussion.
NOTE: COMS 307 through 316 are offered on a three-year cycle.

COMS 307 ***Hollywood in the Silent Era*** (3 credits)
Prerequisite: 30 credits. In-depth study of the 60-year career of Chaplin, with special emphasis on the great early comics (Keaton, etc.); Hollywood and the birth of the movies: D.W.Griffith, von Stroheim.

COMS 308 ***The German Expressionist Movement*** (3 credits)
Prerequisite: 30 credits. Lang, Murnau, Pabst, etc., in Germany, and in their later Hollywood careers. The German cinema of the '20's; the Expressionists. Integration with the socio-cultural climate of the pre-Hitler days.

COMS 309 ***The Revolutionary Soviet Cinema*** (3 credits)
Prerequisite: 30 credits. The Soviet Formalists of the '20's: Eisenstein, Pudovkin, Dovzenko. Film and revolution; Marxist aesthetics. The later evolution of the Soviet cinema.

COMS 310 ***The Hollywood Genres*** (3 credits)
Prerequisite: 30 credits. Concentration on specific genres and directors of Hollywood in its golden era ('30's, '40's). The aesthetics of art and the mass audience.

COMS 311 ***The Classic French Cinema*** (3 credits)
Prerequisite: 30 credits. Before the Nouvelle Vague, the great French cinema of Renoir, Clair, Ophuls, Cocteau.

COMS 312 ***La Nouvelle Vague*** (3 credits)
Prerequisite: 30 credits. Truffaut, Godard, Chabrol, Resnais, etc., from their New-Wave days to the present. Bresson. The new cinema: consciousness, ideology, art.

COMS 313 ***Ingmar Bergman and the Scandinavians*** (3 credits)
Prerequisite: 30 credits. In-depth study of Bergman. The entire context, from the great silent period (Sjostrom, Stiller, etc.) to today (Widerberg, etc.).

COMS 314 ***The Italians, from Neo-Realism to Today*** (3 credits)
Prerequisite: 30 credits. The neo-realist movement; Rossellini, De Sica, Visconti, Fellini, Antonioni, Pasolini, Bertolucci, Wertmuller.

COMS 315 ***Shakespeare in the Cinema*** (3 credits)
Prerequisite: 30 credits. *Hamlet, Macbeth, Othello,* etc., as seen in the works of Welles, Olivier, the Russians. A study of the plays and their cinematic expressions: Shakespeare's world via cinema.

COMS 316 ***The Canadian Cinema*** (3 credits)
Prerequisite: 30 credits. The aesthetic, economic, sociopolitico-cultural dimensions of feature films in Canada. Course conducted in collaboration with Canadian film directors, producers, actors, critics.

COMS 317 ***Film Studies*** (3 credits)
Prerequisite: 60 credits; permission of the Department. A student may repeat one of the foregoing courses (307 to 316), provided that the content is different, by registering for credit under COMS 317.

Communication Studies students may take no more than 6 credits from the Department of Cinema or Department of Printmaking and Photography courses of the Faculty of Fine Arts.

COMS 320 ***Media Styles, Modes, and Carriers*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Selected segments from the history of painting, architecture, drama, music, related to their possible use in media productions, and to the contemporary philosophy of communication. Readings and viewings of major styles, artworks, and authors in a self-instructional, programmed course.

COMS 321 ***History of Media Carriers*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Selected segments from the history of photography, cinematography, radio, and television, media design related to the possible use in media productions, and to the contemporary philosophy of communication. Readings and viewings of major styles, artworks, and authors in a self-instructional, programmed course.

COMS 322 ***Media and Media Culture*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Media and their impact on people and society, in order of historical appearance: literacy, printing, the still photograph, cinema, radio, television. The growth of the technologies of work, movement, education, thought, and social organization. The problems of the individual in a technological environment.
NOTE: Students who have received credit for COMS 304 may not take this course for credit.

COMS 323 ***Media Theory*** (3 credits)
Prerequisite: COMS 322. Analysis of the historical and current evidence in an attempt to understand what media are, what they do of themselves, their common characteristics, cumulative patterns and necessary effects. Are there inherent "laws" of media? Emphasis is on the intellectual faculty as manifested in society's response to media.
NOTE: Students who have received credit for COMS 304 may not take this course for credit.

COMS 330 ***Advanced Script-Writing for Television*** (6 credits)
Prerequisite: Registration in a Communication Studies programme; submission of a qualifying assignment by July 1 and subsequent approval of instructor. This assignment, which varies from year to year, is intended to test the student's writing ability and creative imagination. Anatomy of script; audio-visual components and functions; TV drama, comedy, documentary, docu-drama. The creative process: plot development, character and dialogue; uses of tension, conflict, "tricks of the trade"; professional attitude and discipline vis-a-vis the market. Lectures, demonstrations, group discussions, and script projects.

COMS 331 ***Documentary Television*** (3 credits)
Prerequisite: 30 credits; open to all University students; written permission of the Department. A survey of the documentary television field from its beginning until today, with an examination of characteristic styles and forms (informative, biographical, current events, compilative, etc.). The method consists of lecture, video example, critique, and discussions.

COMS 351 ***Biocybernetic Research*** (6 credits)
Prerequisite: COMS 255 and permission of the Department. An examination of the aids for information-impact measurements, demonstrated on communication media carriers. Testing is conducted on information complexes previously analyzed; e.g., photographs, advertisements, film segments, television programme sequences, exhibitions, urban environments, and open-country landscapes. The main emphasis of learning is on the methodology of tests, diagnoses, and interpretations of results for practical media productions. A biometrical and biotelemetrical approach is used for testing. Each student works on individual projects during the year. Tutorial course.
NOTE: Students who have received credit for COMS 350 may not take this course for credit.

COMS 352 ***Broadcasting Policy in Canada*** (3 credits)
Prerequisite: 30 credits; permission of the Department. This course acquaints the student with the historical development of broadcasting and broadcasting legislation in Canada. It covers the present state of broadcasting policy in Canada, its goals and problems, and explores alternative solutions.
NOTE: Students who have received credit for COMS 467 may not take this course for credit.

COMS 355 ***Media Computer Applications I*** (3 credits)
Prerequisite: COMS 275; COMS 278; COMS 284; written permission of the Department. Concepts and

practical techniques for the production of computer-generated colour video graphics and graphic text layouts; analog and digital representation, transmission, storage and processing of visual and aural information. Lectures and laboratory.

COMS 356 ***Media Computer Applications II*** (3 credits)
Prerequisite: COMS 355. More advanced concepts and techniques for the production of computer-generated colour video graphics; simple computer-generated sound; information input/retrieval networks, including videotex systems. Lectures and laboratory.

COMS 360 ***Mass Communication*** (3 credits)
The course examines the nature and forms of Mass Communication, the social sources and uses of Mass Communication, its psychology, audiences, and effects. The ethics of Mass Communication are also discussed. Through guest lecturers from the various media and readings of contemporary analyses/critiques, issues such as media ownership and access, government and self-regulation, technological implications, media accountability, etc., are raised.

COMS 361 ***Seminar in Propaganda*** (3 credits)
Prerequisite: 30 credits. The aim of this course is to recognize the orchestration of the elements of propaganda in media, and to develop the means to deal with it. Course methodology includes lectures, discussions, and projects.

COMS 362 ***Psychology of Communication*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. The objectives of the course are to provide the learner with: 1) an overview of psychological processes active in the communicative act; 2) the opportunity to explore a single media area in depth, either independently or in a small group. Through a variety of formats, topic areas such as the following are explored: perception and information processing, language development, areas of para-psychology related to communication, influences on attitude/behaviour, verbal/non-verbal codes, meaning, etc.

COMS 364 ***Communication and the Canadian North*** (3 credits)
Prerequisite: 30 credits; open only to students in Communication Studies programmes; written permission of the Department. The course examines the historical context of Eskimo-White interaction in the Arctic; the role that media technology has played in Northern development and social change; the current research and experimental approaches to communication problems in the Canadian North.

COMS 366 ***Interpersonal Communication and Cultural Context*** (3 credits)
Prerequisite: 30 credits; permission of the Department. This course examines the relationship between value orientations, social perception, self-concept, identity and other culturally-determined phenomena, as well as verbal and non-verbal communication processes. It draws upon theory and research on communication between members of different cultures and sub-cultures.
NOTE: Students who have received credit for COMS 363 may not take this course for credit.

COMS 367 ***Media and Cultural Context*** (3 credits)
Prerequisite: 30 credits; permission of the Department. This course examines the ways in which different cultures express themselves using print, film, radio and television; the cultural content of media messages; the role of mass communication across cultural boundaries, as well as media representation of, and access by, cultural groups. The course utilizes screenings and case studies.
NOTE: Students who have received credit for COMS 363 may not take this course for credit.

COMS 374 ***Visual Dynamics II*** (6 credits)
Prerequisite: COMS 275; written permission of the Department. This course involves both theory and fieldwork in photographing human-created environments; e.g., the city, using natural light. The student acquires an understanding of the problems of distance and direction by means of lectures, critiques of fieldwork, and individual consultation.
NOTE: Students are required to possess certain recommended equipment.

COMS 375 ***Visual Dynamics III*** (6 credits)
Prerequisite: COMS 374; written permission of the Department. A study of the development of visual artifacts and media in the search for an increasingly adequate mimesis of persons, situations, and meanings. The course comprises both the practical and the theoretical aspects of the visual image, historically and currently, and examines the assumptions underlying the quest for the auto-communicative image. Lectures and Laboratory: average, 6 hours per week.

COMS 378 ***Seminar and Practicum in Sound II*** (6 credits)
Prerequisite: COMS 230; COMS 278; written permission of the Department. This course gives the student a knowledge of the basic disciplines necessary for constructing aural message forms from the simplest to the most complex; also, experience in the various technologies required to apply these aural forms to radio, film, television, etc. Students prepare, produce, and direct, individually and in teams, a number of projects. Lectures and Laboratory: average, 6 hours per week.

COMS 381 ***Seminar and Practicum in Film II*** (6 credits)
Prerequisite: Above-average standing in COMS 284; written permission of the Department. This course involves an examination of the communicative process through the medium of film. Areas covered include

scripting, directing, and shooting, with both silent and sync-sound equipment. Productions are designed to test the students' theoretical knowledge and give practical experience in the craft of film-making. Lectures and Laboratory: average, 6 hours per week.

COMS 387 ***Seminar and Practicum in Television II*** (6 credits)
Prerequisite: COMS 284; written permission of the Department. A study of the components related to the creation of the television documentary and short-feature programme in terms of the theoretical possibilities inherent in the medium. Student productions in the two genres, from idea-stage through completed videotape, constitute the laboratory section of the course. Lectures and Laboratory: average, 6 hours per week.

COMS 398 ***Selected Topics in Communication Studies*** (3 credits)

COMS 399 ***Selected Topics in Communication Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

COMS 416 ***Film Criticism*** (3 credits)
Prerequisite: 60 credits; permission of the Department. An introduction to the assumptions, methodologies and vocabularies implicit in important schools of popular and academic film criticism.

COMS 417 ***Film Ideas*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Seminar using film criticism to focus on aesthetic/cultural dimension of present trend-setting films, and to explore students' sensibility in context of contemporary culture. Methodology includes viewings, discussions, written critiques, critical/aesthetic readings.

COMS 435 ***Documentary Film and Television Genres I*** (3 credits)
Prerequisite: 30 credits in Communication Studies. Survey of genres in documentary film and television such as: biographical, industrial, travelogue, nature, scientific, training, educational, children's films and TV programmes. Examples from Canada, USA, Europe.

COMS 436 ***Documentary Film and Television Genres II*** (3 credits)
Prerequisite: COMS 435. An in-depth study of one of the film and television genres surveyed in COMS 435. Tutorial course.

COMS 437 ***Seminar in Media Forecast*** (3 credits)
Prerequisite: 60 credits. This course examines trends in film, sound, television, and other media for future applications. The course includes theory of media effects. Representatives from industry and government are invited to discuss future trends in media utilization. The course demands a theoretical and practical model for original or novel use of a medium or media mix.

COMS 444 ***Television Aesthetics I*** (3 credits)
Prerequisite: 30 credits; enrolment in a Communication Studies programme. This course involves the study and application of evaluative judgements and aesthetic principles appropriate to the television medium. It emphasizes the development of television criticism and aesthetics based on a synthesis of the fundamental image elements (light, colour, space, time, motion, and sound) together with an analysis of their interrelationship in the finished product: the television programme.

COMS 445 ***Television Aesthetics II*** (3 credits)
Prerequisite: COMS 444. This tutorial course is a continuation of COMS 444 for students who wish to do research and experimentation with specific aspects of television aesthetic principles. Assignments include a research paper derived from specific experimental television production units.

COMS 454 ***Communication Law and Administration I*** (3 credits)
Prerequisite: 30 credits; enrolment in a Communication Studies programme. The course focuses upon the legal and business aspects of the communications industry. Among the items covered are basic contract law, torts or delicts, libel and slander and copyright laws. The legal relationships between the various parties involved in the field of communications, e.g., producer and writer, are also analyzed.

COMS 455 ***Communication Law and Administration II*** (3 credits)
Prerequisite: COMS 454. Studies of particular cases are chosen to illustrate specific problems and their resolutions. In-depth treatment is given to applications of areas developed in COMS 454.

COMS 460 ***Political Communication*** (3 credits)
Prerequisite: Permission of the Department. The relationships between media institutions and political institutions, both in Canada and internationally are examined. Issues such as: the flow of political information; the social and political construction of news; the politics of regulation; the politics of influence in campaigns, nation-building socialization through media; ideology in the media, and alternatives to traditional media are explored.
NOTE: Students who have received credit for COMS 465 may not take this course for credit.

COMS 461 ***Organizational Communication*** (3 credits)
Prerequisite: Permission of the Department. The flow of communication within organizational and institutional structures is examined. Topics such as: communication function; patterns and networks; directionality; overload and underload; communication roles and expectations; and processes of organizing are explored. Discussion and field study are combined with readings for an emphasis on applied theory.
NOTE: Students who have received credit for COMS 465 may not take this course for credit.

COMS 462 ***Communication, Culture, and Popular Art*** (3 credits)
Prerequisite: 60 credits; permission of the Department. An introduction to the social analysis of works of popular art. Cultural products such as television programmes, hit records, and popular novels are examined through techniques of textual analysis. Within the context of an examination of cultural theories, the course focusses on (1) critical methods based in the theory of rhetoric and (2) theories of mass culture and alienation.

COMS 463 ***Semiotics*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. This course provides a detailed introduction to the semiotics of communication. The course considers the formal characteristics of signs and codes and examines how signs or "texts" produce meaning. It focuses on three types of "texts": the advertisement, the news, and the fictional narrative. Central to this course is the notion that sign-systems are fundamental to the production of "knowledge" and ideology. The course proceeds through lectures, an analytical reading of assigned texts, and student discussion and presentations.

COMS 468 ***Theoretical Issues in Development Communications*** (3 credits)
Prerequisite: 60 credits; permission of the Department. This seminar examines historical and current research on, and theoretical approaches to, the role media can play in indigenous and international development.
NOTE: Students who have received credit for COMS 466 may not take this course for credit.

COMS 469 ***Media Applications to Participatory Development*** (3 credits)
Prerequisite: 60 credits; permission of the Department. This seminar examines the impact and usefulness of appropriate media (film, television, community radio, interactive satellites, etc.) to indigenous and international development.
NOTE: Students who have received credit for COMS 466 may not take this course for credit.

COMS 470 ***Advertising and the Consumer Society*** (3 credits)
Prerequisite: Permission of the Department; priority is given to students in Communication Studies programmes. Advertising as an economic force is examined from a mass-media focus. Communication strategies are analyzed. A promotional campaign is prepared and presented as a team project.

COMS 471 ***Public Relations: Principles and Problems*** (3 credits)
Prerequisite: Permission of the Department; priority is given to students in Communication Studies programmes. This course considers the principles and responsibilities of Public Relations, and critically examines specific P.R. problems and the choice of media in effecting solutions.

COMS 475 ***Visual Dynamics IV*** (6 credits)
Prerequisite: COMS 375; written permission of the Department. Developing the visual imagination: conceiving and organizing ideas for expression through media, such as Print, Film, Television. Each student is asked to conceive a "story" (an integrated narrative), and to determine its most appropriate visual presentation (emphasizing the story's significance and maintaining overall unity). Three presentational modes are considered: a) the controlled sequence; b) the randomly perceived message; c) the pictorial symbol. Lectures and Laboratory: average, 6 hours per week.

COMS 478 ***Seminar and Practicum in Sound III*** (6 credits)
Prerequisite: COMS 378; written permission of the Department. Conceptual and practical study of the temporal and spatial structure of synthetic sound. Control of the fine and coarse structure of the volume, pitch and timbre of synthesized sound. Lectures and production projects are designed to give the student a broad acquaintance with the current concepts and techniques in electronic sound production. Lectures and laboratory.

COMS 481 ***Seminar and Practicum in Film III*** (6 credits)
Prerequisite: Above-average standing in COMS 381; written permission of the Department. An advanced course in film theory and communication. Film-making processes covered includes scripting, directing, "A and B roll" editing, and shooting with crystal sync-sound equipment. Lectures and Laboratory: average, 6 hours per week.

COMS 487 ***Seminar and Practicum in Television III*** (6 credits)
Prerequisite: Above-average standing in COMS 387; written permission of the Department. An advanced course in television theory and communication. Possible options, depending on the ability of the students in any one year, include the dramatic documentary and the complete adaptation for television of professional plays. Lectures and Laboratory: average, 6 hours per week.

COMS 490 ***Communication Programming*** (6 credits)
Prerequisite: COMS 255; COMS 351. This course studies the interaction among several media, e.g., film,

sound, television, static 2D and 3D image. Special attention is given to application in the areas of displays, exhibitions, entertainment endeavours, multi-media shows, where more than one medium is used in one coherent programme.

COMS 496 ***Honours Project I*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Towards the end of their second year, students enrolled in a Communication Studies programme who have demonstrated scholarly and creative ability may be selected for major research or production in a communications area of special interest. During the third year, individually or in teams, the project is realized in close collaboration with Faculty directors.
NOTE: Students who have received credit for COMS 495 may not take this course for credit.

COMS 497 ***Honours Project II*** (3 credits)
Prerequisite: Open only to students in Communication Studies programmes. Students who have received credit for COMS 496 may register for COMS 497.

COMS 498 ***Advanced Topics in Communication Studies*** (3 credits)

COMS 499 ***Advanced Topics in Communication Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.080 Economics

Chair
GORDON FISHER, *Professor*

Professors
JALEEL AHMAD
SYED AHSAN
MURIEL ARMSTRONG
FRANK HAYES
JAMES McINTOSH
FRANK MÜLLER
JOHN W. O'BRIEN

Associate Professors
SHAFIQ ALVI
ANASTAS ANASTASOPOULOS
JON BRESLAW
IAN IRVINE
M. NURUL ISLAM
ZENG RUNG LIU
DAN OTCHERE
BALBIR S. SAHNI
DANIEL SHAPIRO
ECKHARD SIGGEL
WILLIAM M.A. SIMS
MORTON STELCNER
AKIRA TAKAHASHI

Assistant Professors
CHRISTIAN BELZIL
BRYAN CAMPBELL
GREG LEBLANC
CHARLES MALLORY
JOHN STAPLETON
DOUGLAS WILLSON

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

BA DEGREE PROGRAMMES IN ECONOMICS

60 BA Honours in Economics
6 *ECON 201^3, 203^3
12 ECON 301^3, 302^3, 303^3, 304^3
6 ECON 325^3, 326^3
6 **ECON 221^3 and 222^3 or DESC 243^3 and 244^3
12 Chosen from ECON 401^3, 403^3, 408^6, 421^3, 422^3, 425^3, 426^3, 432^3, 435^3, 442^3, 443^3
6 Chosen from 400-level ECON courses
12 ECON elective credits

60 BA Specialization in Economics
6 *ECON 201^3, 203^3
12 ECON 301^3, 302^3, 303^3, 304^3
6 ECON 325^3 and 326^3
6 **ECON 221^3 and 222^3 or DESC 243^3 and 244^3
18 Chosen from 400-level ECON courses
12 ECON elective credits

42 BA Major in Economics
6 *ECON 201^3, 203^3
6 **ECON 221^3 and 222^3 or DESC 243^3 and 244^3
12 ECON 301^3, 302^3, 303^3, 304^3
6 Chosen from 400-level ECON courses
12 ECON elective credits

30 Minor in Economics
6 *ECON 201^3, 203^3
12 ECON 301^3, 302^3, 303^3, 304^3
12 ECON elective credits

**Students exempted from ECON 201 and/or 203 are required to replace these courses with ECON electives.*
***Any equivalent 6 credits satisfy this component of the programme. See note after ECON 222.*

Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements which applied at the date of their admission to the Honours Programme. (Please refer to §16.2.4 of this Calendar).
The courses in Economics listed below are acceptable as Science credits in the Bachelor of Science degree.

ECONOMICS 222^3, 325^3, 326^3, 421^3, 422^3, 425^3, 426^3

BCOMM DEGREE PROGRAMMES IN ECONOMICS

BComm Honours in Economics
BComm Major in Economics
(See §61.60)

BUSINESS STUDIES

Certificate in Business Studies
Minor in Business Studies
(See §61.140)

ECONOMICS CO-OPERATIVE PROGRAMME

Director
JOHN W. O'BRIEN, *Professor*

The Economics Co-operative Programme is offered to students who are enrolled in the BA Honours or Specialization in Economics. Students interested in applying for the Economics Co-op should refer to §23 where a full description of the admission requirements is provided.
Academic content is identical to that of the regular programme, but six study terms are interspersed with four work terms.
Each student is supervised personally and must meet the requirements specified by the Faculty of Arts and Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Economics Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

ECON 200 ***Introductory Economics*** (6 credits)
This course is designed primarily for students not majoring in Economics or Commerce, but who wish to have an introduction to economics and the Canadian economy. Its content is essentially the same as that of ECON 201 and ECON 203. However, there is greater emphasis on the economic environment of the firm, and the use of elementary tools of analysis to study Canadian economic institutions, government economic policies and current economic issues.
NOTE: Students who have received credit or exemption for ECON 201 and/or 203, or equivalent, may not take this course for credit.

ECON 201 ***Introduction to Microeconomics*** (3 credits)
Introduction to the functioning of the market system; concepts of supply and demand, the role of prices in resource allocation; production decisions by firms. Analysis of differences between competition and monopoly, and the implications for economic efficiency; theories of labour markets and wage determination.
NOTE: Students who have received credit or exemption for ECON 200 may not take this course for credit.

ECON 203 ***Introduction to Macroeconomics*** (3 credits)
An introductory analysis of aggregate economic activity. The focus is on the principles of determination of the level of employment, national income, real output, inflation, and international balance of payments. The course also analyzes the principles which govern trade relations among countries. These topics are integrated by a discussion of government monetary and fiscal policies to stabilize economic activity.
NOTE: Students who have received credit or exemption for ECON 200 may not take this course for credit.

ECON 221 ***Statistical Methods I*** (3 credits)
Prerequisite: MATH 201 or CEGEP equivalent. Elementary probability, permutations and combinations, binomial and normal distribution. Analysis and organization of statistical data. Tests of hypotheses. Confidence limits. Introduction into linear regression and correlation. *NOTE See §200.7*
NOTE: Credits will be given for only two 3-credit courses from ECON 221 and 222, MATH 207 or MATH 242, 243, DESC 243 and 244, SOCI 212, 213, PSYC 315 and 316 or PSYC 317.

ECON 222 ***Statistical Methods II*** (3 credits)
Prerequisite: ECON 221, or equivalent. The course is an introduction to the application of statistical techniques to economic data. Topics discussed include, among others, time series, statistical inference, analysis of variance, correlation and regression. *NOTE See §200.7*
NOTE: Credits will be given for only two 3-credit courses from ECON 221 and 222, MATH 207 or MATH 242, 243, DESC 243 and 244, SOCI 212, 213, PSYC 315 and 316 or PSYC 317.

ECON 251 ***Introduction to Economic History I: Economic Crisis and Recovery in Western Europe, 1300-1600*** (3 credits)
An economic analysis of the economic downturn of the of the fourteenth century in Western Europe and the recovery which followed. Discussion centres upon England and France. Economic theory at a very simple level is used to assess the problem of economic development and growth within the context of the changing institutional constraints.
NOTE: Students who have received credit for ECON 250 may not take this course for credit.

ECON 252 ***Introduction to Economic History II: Sustained Economic Development and Growth: Western Europe, After 1600*** (3 credits)
The economic reasoning underlying humanity's first venture into sustained growth and development is presented. This involves a discussion of the agricultural and industrial revolutions which took place in Western Europe and of the regional disparities which developed, such as between England, France and Holland. Simple economic theory is used to aid in our analysis.
NOTE: Students who have received credit for ECON 250 may not take this course for credit.

ECON 298 ***Selected Topics in Economics*** (3 credits)

ECON 299 ***Selected Topics in Economics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ECON 301 ***Intermediate Microeconomic Theory I*** (3 credits)
Prerequisite: ECON 201; ECON 203. Theory and measurement of demand, theory of consumer behaviour, production, theory of the firm, and cost and revenue analysis.

ECON 302 ***Intermediate Microeconomic Theory II*** (3 credits)
Prerequisite: ECON 301. Market structures (perfect competition, monopoly, oligopoly), industrial concentration, factor markets, income distribution, economic efficiency, general equilibrium, welfare economics.

ECON 303 ***Intermediate Macroeconomic Theory I*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course deals with the major areas of aggregate economics. Topics include the definitions and measurements of indicators of economic activity; the classical, Keynesian, and rational expectations models of the economy; the derivation of the AS schedule, the ISLM approach to the AD schedule; role of macro-economic policy.

ECON 304 ***Intermediate Macroeconomic Theory II*** (3 credits)
Prerequisite: ECON 303. Review of the complete Keynesian system: role of investment demand, the consumption function, the demand for money function. Other topics include the open economy models of income determination, interest rates, and exchange rates, business cycles, economic growth, macroeconomic policy and their application to Canada.

ECON 311 ***Economic Development I*** (3 credits)
Prerequisite: ECON 201; ECON 203. The course investigates comparative economic development, with special attention to problems of capital formation, population growth, quality of labour force, and social and cultural attitudes towards economic modernization. Theories of economic development are evaluated in the context of the realities of historical patterns and the varying degrees of ability to achieve modernization.

ECON 312 ***Economic Development II*** (3 credits)
Prerequisite: ECON 311. The concept and meaning of economic planning, methodology and strategy of planning, input-output and sector analysis, techniques of planning, investment criteria and priorities, study and appraisal of economic plans of a few countries.

ECON 315 ***The Economic Development of Québec*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course reviews past and present trends in the economic development of Québec. Emphasis is placed on the economic growth of Québec since the Second World War. Attention is given to the regional aspects of Québec's growth problems.

ECON 316 ***Canadian Economic Issues I*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course is devoted to an analysis of some economic issues facing Canada; for example, employment and unemployment, inflation, economic growth and potential, income distribution, social-security policies, monetary and fiscal policies.

ECON 317 ***Canadian Economic Issues II*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course is similar to ECON 316, but covers a different group of topics; for example, foreign ownership and control, regional-development problems, monopoly and competition, government regulation of business, agricultural policy, trade policy.

ECON 323 ***Statistical Packages and Economic Data*** (3 credits)
Prerequisite: ECON 201; ECON 203. The objective of this course is to familiarize the student with techniques of obtaining, manipulating and analyzing economic data. Given the ever-increasing importance of the computer in the storage, retrieval and processing of information, another purpose of the course is to provide a basic understanding of a computing system and of using data banks and statistical packages. Particular emphasis is given to SPSS, TSP and to CANSIM. The student should be prepared to devote at least 10 hours/week to this course. Provision is made for weekly tutorials.
NOTE: Registration is limited to those who are in the Honours, Specialization or Major programmes in Economics.

ECON 325 ***Mathematics for Economists I*** (3 credits)
Prerequisite: ECON 201; ECON 203; MATH 201, or equivalent. This course introduces the student to differential and integral calculus and to their applications in economic analysis. Topics covered include set theory, the concept of limits and rules for differentiation and integration. It also deals with the relevance of these concepts and techniques to economic problems such as maximization, equilibrium analysis, and dynamic adjustments.

ECON 326 ***Mathematics for Economists II*** (3 credits)
Prerequisite: ECON 325. The main emphasis is on the study of linear algebra and its application to the solution of economic models consisting of a system of linear simultaneous equations. Topics covered include: matrices and vectors; basic properties of determinants and their use in solving equations pertaining to economic problems, such as linear programming and constrained optimization.

ECON 331 ***Money and Banking*** (3 credits)
Prerequisite: ECON 201; ECON 203. Overview of a monetary economy: nature, forms and the economic role of money. Monetary standards: markets, prices, and the value of money; the payments system; financial markets. Determinants of size and distribution of wealth portfolios. Supply of money: measure, composition, and size determination. The economic role of commercial banks and non-bank financial intermediaries. Central banking and monetary policy. The international monetary system. (Topics covered within the Canadian banking institutional framework.)

ECON 335 ***Public Sector Economics: Expenditures*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course examines government fiscal activity within the context of a free-market system. Rationale for public-sector activity is reviewed in terms of economic efficiency conditions and the market failures. Among the topics covered in the course are growth of public spending, the concept of public good externalities, collective decision-making process, pure theory of public expenditures, local expenditures analysis, and efficiency in public spending, with special reference to Québec and Canada.

ECON 336 ***Public Sector Economics: Taxation*** (3 credits)
Prerequisite: ECON 201; ECON 203. The principal purpose of this course is to examine and evaluate the important elements of the Canadian fiscal structure, emphasizing taxation and the financing of public expenditures. Among others, issues in taxation of income, both at the individual and corporate levels, excise and sales taxation, taxation of capital gains and wealth, intergovernmental fiscal relations, and tax reform are taken up.
NOTE: Accountancy Majors students may not take this course for credit.

ECON 341 ***International Economic Relations*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course focuses on the discussion and the analysis of the major forms of economic relations among nations; viz., international trade and international capital movements. Emphasis is placed on policies and institutions for the smooth functioning of the international economy, although some theoretical constructs are also introduced. Topics covered include international trade, protection, balance of payments, economic integration, and international monetary system.

ECON 351 ***Economic History of Canada*** (6 credits)
Prerequisite: ECON 201; ECON 203. This course is designed to introduce the student to Canadian economic development from the early period of settlement to the present day. Emphasis is placed on the economic history of Canada since Confederation.

ECON 352 ***Economic History of the U.S.A.*** (6 credits)
Prerequisite: ECON 201; ECON 203. American economic history is presented from the viewpoint of the "new" economic history. This is a topical approach in which formal economics is used to evaluate traditional historical material. Among the topics which are covered are: the economic consequences of slavery, the American business cycle, the development of American central banking, the merger movements, the causes of the American "take-off", and the economic causes and consequences of the major wars.

ECON 353 ***Economic History of Europe*** (6 credits)
Prerequisite: ECON 201; ECON 203. The course explores the causes and consequences of the British Industrial Revolution and its diffusion to the Continent, in terms of differential national-growth patterns, and social problems associated with economic change. It includes an analysis of free trade, economic nationalism, the new imperialism, the importance of the crisis of 1929, in terms of economic organization, thought, and policy. Post-World War II reorganization, in terms of planning the welfare state, and economic integration.

ECON 361 ***Industrial Organization*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course develops the relationship of the firm to various forms of market structure. The course focuses on the objectives of the corporation, corporate interdependence, and the government control of industry. A study of policy matters centres on anti-trust and corporate regulation, with respect to both the legislative and economic aspects.

ECON 362 ***Economics of the Firm*** (3 credits)
Prerequisite: ECON 201; ECON 222 or DESC 244. This course stresses the application of economic principles and methodologies to the decision making process of the firm, with an emphasis on the role of risk and uncertainty. Topics include decision-making criteria, demand analysis and estimation, cost analysis and estimation, pricing theory under various market structures, applied topics in pricing, and the impact of government on the firm. This course is primarily of interest to Commerce students, but is open to others as well.

ECON 363 ***Economics of Technological Change*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course deals with a critical analysis of the technological constraints on economic processes, research and development, and the economic factors affecting the rate and direction of technological change. Topics include: the economic implications of learning by doing and technical systems; micro-economic effects of innovation and adoption theory; and the long-term macro-economic policy implications of technological change.

ECON 370 ***Comparative Economic Systems*** (6 credits)
Prerequisite: ECON 201; ECON 203. A comparative study of contemporary economic systems. While mainly concerned with the institutional features of contemporary free-market economics, the course also deals with their counterparts, the systems of a command economy, and a Socialist market economy. Of primary interest are the institutions, mechanisms, and policies which govern allocation, efficiency, growth, and distribution of income, with emphasis on the historical background of the institutions and the social, political, and ideological influences which continue to shape them.

ECON 375 ***The Soviet Economy*** (3 credits)
Prerequisite: ECON 201; ECON 203. The evolution of the Soviet economic system and the policy measures adopted to deal with the problems of establishing and consolidating a socialist state. Special attention is given to Lenin's role in the early phase of the Soviet system, and early economic measures, such as the collectivization of farms. Other topics covered are: the nature of economic planning and progress under Stalin, and the important recent reforms and modifications of the Soviet system under the impact of Liberman's proposals.

ECON 377 ***The Chinese Economy*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course is devoted to an analysis of Chinese economic development since 1949. Topics include: performance and efficiency, strategy for development, agricultural organization, the contribution of policy to economic growth, the industrial sector, control and allocation of resources, national economic planning.

ECON 381 ***Labour Economics I*** (3 credits)
Prerequisite: ECON 201; ECON 203. The general objective of this course is to acquaint the student with various theoretical and empirical issues in the area of labour economics. Particular emphasis is placed upon the relation between theoretical frameworks and their empirical counterparts in Canada. Topics include the theory of wage determination, the effects of minimum wages, human capital theory, the economics of discrimination, and the economics of the household.

ECON 382 ***Industrial Relations I*** (3 credits)
Prerequisite: ECON 201; ECON 203. A study of the general and practical problems that arise in the labour field, such as collective bargaining, the legal framework for the settlement of industrial disputes, the weapons of industrial conflict; the labour movement; contemporary labour issues, such as automation, cost-push inflation, and structural employment.

ECON 383 ***Industrial Relations II*** (3 credits)
Prerequisite: ECON 382. Topics in industrial relations, with particular emphasis on developments in Canada.

ECON 386 ***Economics of Human Resources*** (3 credits)
Prerequisite: ECON 201; ECON 203. A study of recent contributions by economists to the understanding of and solution to social problems which society currently faces in the areas of crime, health, education, and welfare. In addition, specific federal and provincial governmental policies in these areas are analyzed with the standard tools of economics.

ECON 387 ***Labour Law*** (6 credits)
Prerequisite: ECON 201; ECON 203. The development of the trade union movement and early labour legislation in the U.S.A. and Canada; collective bargaining; labour law in Canada and Québec today, with emphasis on the Industrial Relations and Disputes Investigations Act (Canada), the Québec Labour Code, and related statutes. An in-depth study of employer's free speech; evocation in matters of arbitration awards; injunctions; successor rights. Practice and procedure before the courts, and labour relations boards and commissions.

ECON 391 ***Economics of the Environment*** (3 credits)
Prerequisite: ECON 201; ECON 203. The subject of this course is environmental quality. It proceeds through an analysis of the relationships among the natural environment, economics, and institutions. The objective is to depict the problem of environmental quality as an economic problem whose solution demands major changes in economic, political, and legal institutions. Attention is also given to policies of collective environmental actions in which the effective management of common property resources is discussed. The course concludes with a discussion of some broader issues, such as the consistency of improved environmental quality with continued economic and population growth.

ECON 392 ***Urban Economics*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course focuses on the basic issues of economic growth and stagnation, urban land use, the problems of the urban public economy, and special urban problems, such as transportation, congestion, poverty, housing, and urban renewal, and zoning.

ECON 396 ***Natural Resource Economics*** (3 credits)
Prerequisite: ECON 201; ECON 203. This course focuses on the problems of the finiteness of the natural resources base in Canada and in the world, and on an analysis of the demand for and supply of natural resources and energy. The course also discusses the economic aspects of a selected group of conservation measures (financial incentives, reallocation of property rights, regulation).

ECON 397 ***Economics of Discrimination*** (3 credits)
Prerequisite: ECON 201; ECON 203. The purpose of this course is to examine some economic issues of discrimination, with particular reference to women in a Canadian context. Among the topics so examined are: techniques for measuring discrimination and poverty, review of empirical studies, traditional and radical approaches to the study of discrimination, and policies to combat discrimination and poverty.

ECON 398 ***Selected Topics in Economics*** (3 credits)

ECON 399 ***Selected Topics in Economics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ECON 401 ***Advanced Microeconomic Theory*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 325; ECON 326. Selected topics in microeconomic analysis, including: methodology, general equilibrium analysis, welfare economics; theory of the firm, factor pricing, and income distribution capital theory. Primarily for Majors, Specialization, and Honours students.

ECON 403 ***Advanced Macroeconomic Theory*** (3 credits)
Prerequisite: ECON 303; ECON 304; ECON 325; ECON 326. Selected topics in macroeconomic analysis, including construction of models of the economy encompassing the labour, product, and financial markets; the role of monetary and fiscal policies; classical, Keynesian, and post-Keynesian models. Primarily for Majors, Specialization, and Honours students.

ECON 405 ***Welfare Theory*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304. This is an advanced course, intended primarily for Honours students. The course is devoted to an examination of selected topics in contemporary welfare economics and its applications.

ECON 408 ***History of Economic Thought*** (6 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304. This course traces the development of economic analysis from the time of the Scholastics to modern times. It also includes a description of the prevailing economic, social, and cultural environment in which economists have written. Primarily for Majors, Specialization, and Honours students.

ECON 411 ***Quantitative Development I*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 325; ECON 326. Methods of national accounting and input-output analysis for under-developed countries. Methods of comparing standards of living. Patterns of economic development. Appraisal of models constructed on the premises of modern theories of economic development.

ECON 412 ***Quantitative Development II*** (3 credits)
Prerequisite: ECON 411. The model of economic policy. Planning in stages. The model of linear-activity analysis and efficient decentralization of economic decisions. Planning of efficient accumulation of capital. Individual project evaluation. Foreign-aid and debt-service models. Projection of labour or personnel requirements. Evaluation of empirical applications of optimum planning to underdeveloped economies.

ECON 413 ***Economic Growth and Fluctuations*** (3 credits)
Prerequisite: ECON 303; ECON 304. A review of some theories of causes of economic fluctuations. Discussion of the economic climate and of stabilization policies.

ECON 421 ***Econometrics I*** (3 credits)
Prerequisite: ECON 221; ECON 222; ECON 325; ECON 326. This course develops the simple and multiple classical regression models. The problems of mis-specified structures, multicollinearity, and forecasting are also presented.

ECON 422 ***Econometrics II*** (3 credits)
Prerequisite: ECON 421. This course is a continuation of ECON 421. It deals with the problems of random-error correlation, stochastic regressors, and the simulation and the estimation of multiple-equation models.

ECON 425 ***Mathematical Economics I*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304; ECON 325; ECON 326. A set-theoretic approach to the theory of demand and production. Special topics in the application of static optimization.

ECON 426 ***Mathematical Economics II*** (3 credits)
Prerequisite: ECON 425. Optimization over time: theory and applications to problems of consumption and investment planning, growth, and capital accumulation. Differential equations.

ECON 428 ***Optimization Techniques*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304; ECON 325; ECON 326. This is an advanced course for Honours students, and for Specialization and Majors students with the consent of the Department. Topics include linear programming and input-output analysis; basic concepts and solutions of linear programming, its application to optimum resources allocation; exposition of basic inter-industry theory within the framework of input-output techniques; its applications to structural analysis.
NOTE: Only 3 credits will be awarded from ECON 428 and DESC 416.

ECON 432 ***Advanced Monetary Theory*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304; ECON 331 or permission of the Department. The nature of the monetarist-Keynesian controversy and critical appraisal of the IS-LM-AS model. Special

topics; theory and evidence of term structure of interest rates, post-Keynesian demand for and supply of money in aggregative and dis-aggregative economic models. Theory of macro-economic policy. Transmission mechanisms, policy coordination, lags, international constraints, and other problems.

ECON 435 ***Advanced Public Finance*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304. In this course, several key areas in Public Finance are dealt with in depth. Topics covered are selected from the following: public goods and externalities, cost-benefit analysis, pricing policy of public enterprises, structure of commodity taxation, structure of income taxation, issues in tax reform, and intergovernmental fiscal relations.

ECON 442 ***International Economics: Trade Theory*** (3 credits)
Prerequisite: ECON 301; ECON 302. The basis of international trade, gains from trade, factor-price equalization, the tariff, Canadian commercial policy, trade and development, economic integration.

ECON 443 ***International Economics: Finance*** (3 credits)
Prerequisite: ECON 303; ECON 304. International monetary economics, foreign exchange markets, adjustment mechanisms, capital flows, balance of payments and domestic policy goals, international liquidity.

ECON 450 ***Advanced Economic History*** (3 credits)
Prerequisite: ECON 221; ECON 222; ECON 301; ECON 302; ECON 303; ECON 304. Advanced topics in economic history, with emphasis on the application of economic theory to specific historical questions.

ECON 461 ***Industrial Economics*** (3 credits)
Prerequisite: ECON 221; ECON 222; ECON 301; ECON 302. This course analyzes the structure, conduct, and performance of Canadian and U.S. industries. Topics include the determinants of industrial structure, such as economies of scale and barriers to entry, measures of conduct and performance, technological change, advertising, mergers, integration, and public policy.

ECON 462 ***The Corporate Economy*** (3 credits)
Prerequisite: ECON 221 and ECON 222 or equivalent; ECON 301 or FINA 214; ECON 303 or FINA 315. This course examines the nature of the large firm, its behaviour and its impact on the national and international economy. Topics include: the emergence and historical development of the corporate firm; the separation of ownership from control; the large firm in Canada; theories of the large firm; mergers; macro-economic effects of large firms (administered pricing-inflation); the multinational corporation (theories, evidence, and effects).

ECON 463 ***Economics of Regulation*** (3 credits)
Prerequisite: ECON 301; ECON 302. This course is devoted to an examination of the economic aspects of governmental regulations. Besides a critical review of the economic theories of regulation, the spectrum of the existing regulatory network, and empirical investigations aimed at discerning cost-benefits, the course focuses on the process of regulatory reforms in all aspects of the Canadian economy.

ECON 473 ***Economics of Socialism*** (3 credits)
Prerequisite: ECON 301; ECON 302. This course analyzes the theoretical aspects of various types of socialist economies: market, centrally planned, and worker-managed. Definitions and models of the various forms are developed and compared with a capitalist model and with existing socialist economies such as those of Cuba, China, Yugoslavia, and the U.S.S.R.

ECON 476 ***Marxist Economics*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304 or ECON 370, or permission of the Department. A general survey of Marxist theory, including historical and dialectical materialism. Marx's microeconomics: labour theory of value and its classical predecessors; theory of exploitation and the Iron Law of Wages; transformation problem and price theory. Marx's macroeconomics: business cycles and the theory of capitalist development; crises and the breakdown of capitalism. Contemporary Marxism and the question of the withering away of the state.

ECON 481 ***Labour Economics II*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304; ECON 381. Advanced topics in labour economics with special emphasis on labour-market problems and policies in Canada. Topics include the theory of work-leisure choice, mobility and immigration, unemployment and unfilled vacancies, income distribution, labour market information and the wage-price relationship.

ECON 493 ***Regional Economics*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304. This course introduces the student to the methods and techniques of regional economic analysis, and their application to the problems of regional economies within Canada. Among the microeconomic topics covered are: the location behaviour of firms and households, and the factors determining the allocation of land among alternative competing uses. Macroeconomic topics include: the measurement and analysis of regional income and growth levels, cyclical changes in those levels, and interregional differences in growth rates. Policy problems pertinent to Canadian regions are stressed throughout the course.

ECON 495 ***Economics of Transportation and Communications*** (3 credits)
Prerequisite: ECON 301; ECON 302. Congestion problems and solutions, pricing, costs, demand, and regulation in transportation. Some applications to communications.

ECON 497 ***Income Distribution and Economic Inequality*** (3 credits)
Prerequisite: ECON 301; ECON 302; ECON 303; ECON 304. This course presents a survey of the problems involved in measuring and explaining the distribution of economic resources among individuals and families. The course deals with such questions as: Why are some people economically better off than others? What, if anything, can or should be done about this state of affairs? Topics covered include: meaning and measurement of inequality; the distribution of income and wealth and the role of bequests; discrimination and sociological factors; poverty, income maintenance and government policy in Canada.

ECON 498 ***Advanced Topics in Economics*** (3 credits)

ECON 499 ***Advanced Topics in Economics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.090 Education

Chair
WILLIAM C. KNITTER, *Associate Professor*

Professors
PHILIP ABRAMI
JON BAGGALEY
JITENDRA K. BHATNAGAR
GARY BOYD
GARY O. COLDEVIN
HAROLD ENTWISTLE
PARKER D. MITCHELL
PIERRE SIMON

Associate Professors
JOYCE BARAKETT
LOIS J. BARON
ROBERT M. BERNARD
DENNIS J. DICKS
MONA FARRELL
GEOFFREY FIDLER
ARPI HAMALIAN
ELLEN JACOBS
RICHARD F. SCHMID
RONALD SMITH
FLORENCE STEVENS
SANDRA WEBER

Assistant Professors
BETTE CHAMBERS
NINA HOWE
STEVEN SHAW
MARIELA TOVAR

Lecturers
RIVA HEFT
SARA WEINBERG
DAVID WELLS

(For Adult Education, see §31.090.1)
Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

30 Minor in Education

30 Chosen from EDUC 201^6, 210^6, 230^3, 241^3, 305^3, 306^3, 317^3, 321^3, 324^3, 398^3, 399^6, 405^3, 413^3, 414^3, 416^3, 417^3, 422^3, 423^3, 426^3, 427^3, 428^3, 429^3, 440^3, 442^3, 498^3

***72 BA Specialization in Early Childhood Education**

This programme is open to full-time students. Only practising professionals in the field of education may apply as part-time students.

24 *Theory*
(18) EDUC 210^6, 211^3, 262^3, 264^3, 445^3
(6) Chosen from EDUC 413^3, 414^3, 416^3, 417^3, 490^3, 491^3

18 *Practica*
EDUC 271^3, 371^3, 373^3, 473^3, 474^3, 475^3

24 *Methods*
(15) EDUC 380^3, 382^3, 386^3, 387^3, 388^3
(3) Chosen from EDUC 383^3, 384^3, 385^3, 389^3
(6) Chosen from ARTE 201^3, DINE 201^3, MINE 301^3, EXCI 215^3 or 251^3

6 *Foundations*
(3) EDUC 260^3
(3) Chosen from EDUC 241^3, 422^3, 423^3, 426^3, 427^3, 428^3, 429^3, 440^3

NOTE: In addition students must take a minimum of 18 elective credits outside the Department of Education.

**NOTE 1: This programme is open to full-time students. In addition to the application submitted to the University, Specialization applicants must complete a form which may be obtained from the Early Childhood Secretary. Only practising professionals in the field of education may apply as part-time students.*

NOTE 2: Upon successful completion of the BA Specialization in Early Childhood Education programme and application to the Registrar's Services Department, students may be recommended to the Québec Teachers Certification Service for a Québec Teaching Permit (Probation), for prekindergarten, kindergarten and Grades 1-3.

To be recommended for certification students must:

1. achieve at least a B grade in each of the following courses: EDUC 271, 371, 373, 473, 474, 475; and
2. achieve at least a C grade in each of the following courses: EDUC 380, 382, 383, 384, 385, 386, 387, 388 and 389.

Students who obtain a failing grade or a passing grade that is below the level required for recommendation for certification will be placed on conditional standing within the programme and will be so informed in writing. Students will be allowed to repeat the course(s) in question only once in order to achieve the required grade. (For the status of this grade as part of the student record, see §16.3.9.).

Students who fail two internships (i.e., failing the same internship twice or two different internships) will not be allowed to continue in the Early Childhood Education Specialization programme (see §16.3.9).

The provisions of this policy also apply to the Certificate in Education programme. In EDUC 471, at least a B grade is required for such recommendation, in EDUC 480 and 481 at least a C grade.

NOTE 3: Students who intend to teach Catholic religious and moral instruction will be required to take EDUC 389 in addition to THEO 210 and 330 or 350. This is in accordance with the regulations of the Catholic Committee which will begin to affect conditions of employment in 1992. The regulations may be found in the departmental handbook.

42 BA Major in Child Studies

18 EDUC 210[6], 211[3], 260[3], 262[3], 374[3]

12 Chosen from EDUC 305[3], 306[3], 317[3], 405[3], 413[3], 414[3], 416[3], 417[3], 490[3], 491[3]

6 Chosen from EDUC 230[3], 241[3], 321[3], 324[3], 422[3], 423[3], 426[3], 427[3], 428[3], 429[3], 440[3]

6 Chosen from a cognate discipline (courses to be designated)

CERTIFICATE IN EDUCATION

The Department of Education offers a 30-credit programme leading to the Concordia University Certificate in Education and certification from the Provincial Department of Education.

NOTE: This programme is restricted to individuals at present employed in a recognized educational institution in Québec and holding a provisional teaching authorization.

Admission Requirements

1. Evidence of full-time employment with a recognized institution in Québec.
2. Possession of a Québec Provisional Teaching Authorization.

Admission limited.

Courses

EDUC 201[6]

EDUC 210[6]

either EDUC 480[3], 481[3], or an equivalent course in teaching methodology

EDUC 445[3]

EDUC 471[6]

6 additional undergraduate credits in Education chosen in consultation with the Director of the Programme.

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

NOTE:

1. The student must meet the minimum scholarity requirements set by the Provincial government before being recommended for certification. See the conditions for certification following the BA Specialization in Early Childhood Education, above.

2. This programme is not open to teachers of vocational subjects or elementary teachers.

For other programmes which may be of particular interest to teachers, see §22.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

EDUC 201 ***The Nature and Function of Teaching*** (6 credits)
An introduction to the purpose, theories, and methods of teaching.

EDUC 210 ***Psychology of Education*** (6 credits)
This course introduces the student to a broad range of content in educational psychology, including its scope and methods, learning motivation, growth and development, adjustment, individual differences, guidance, and concept of self.

EDUC 211 ***Child Growth and Development*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization or Major in Child Studies, or permission of the Early Childhood Education Director. Students study the physical, cognitive, affective, and social development of the young child. Genetic and environmental factors that influence development are examined. The implications of developmental needs in terms of planning environments are covered.

EDUC 230 ***Introduction to Philosophy of Education*** (3 credits)
This course introduces the student to the content and form of several major educational theories, and to conceptual and logical procedures of philosophizing about education, with particular reference to teaching and learning.

EDUC 241 ***Education in Western Civilization*** (3 credits)
An introduction to selected major thinkers and systems of thought in (and impinging on) education from Antiquity to the twentieth century. Emphasis is placed on thought and practice in the context of significant cultural, socio-economic, political and religious developments.
NOTE: Students who have received credit for EDUC 441 may not take this course for credit.

EDUC 260 ***History and Philosophy of Early Childhood Education*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization, or Major in Child Studies, or permission of the Early Childhood Education Director. This course provides an introduction to the field of early childhood education. The history and philosophy of pre-schools, day care, and the nursery school movement are represented. The influences of major writers, such as Rousseau, Froebel, Pestalozzi, Itard, Seguin, Montessori, and Dewey are examined. Comparative pre-school educational practices in other countries are explored.

EDUC 262 ***The Family and the Child*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization, or Major in Child Studies, or permission of the Early Childhood Education Director. Students are introduced to developmental, psychological and sociological aspects of the child and the family. Emphasis is placed on the structure and functions of the modern family, the transition to parenthood, child-rearing styles, the development of attachments and early family relationships. Problems and issues of the modern family, such as divorce, dual-worker families, single parents, and step-families are also addressed.

EDUC 264 ***Parenthood Study*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization. This course focuses on the role of parents in the development of the young child. Topical issues concerning teacher-parent-child relationships are examined. Students are required to attend a weekly laboratory session in order to observe a parent discussion group and to attend a weekly seminar.

EDUC 271 ***Practicum I: Pre-School Field Experiences*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization. This course is designed as an introduction to the theoretical and applied aspects of Early Childhood Education. Students attend weekly seminars; topics include the development of preschool-aged children, the design of appropriate learning environments, the role of the teacher, curriculum and instruction in Early Childhood Education. This course requires students to spend one day a week for one semester in the Concordia Child Care Centre.

EDUC 298 ***Selected Topics in Education*** (3 credits)

EDUC 299 ***Selected Topics in Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

EDUC 305 ***Technology for Educational Change*** (3 credits)
This course provides an introduction to salient advances in the theory, research and practice of educational technology. The following topics are typically covered: traditional media survey, systems approach and instructional design, origins of information explosion, computer technologies of instruction (e.g., interactive video), distance education, and trends in educational technology research and evaluation.

EDUC 306 ***Computers and Computing in Education*** (3 credits)
Prerequisite: INTE 290 or permission of the Department. This course is an introduction to educational computing. Topics covered include the evaluation and selection of instructional software, and using the computer as a tool for processing information with existing applications (e.g., spreadsheets, databases, authoring languages, graphics) in an educational context. Laboratory work outside the class (IBM-PC- or compatible).

EDUC 317 ***The Urban Child*** (3 credits)
This course concentrates upon the life of the inner-city child and the concomitant influences upon their development in and out of the classroom. Students are instructed in how to view the urban area from the child's perspective, through field assignments in inner-city schools or recreation centres. Lectures by social workers, police officers of the youth section, legal aid counsellors, and inner-city teachers heighten the awareness of students to the environment in which the inner-city child lives.

EDUC 321 ***Sex Role Socialization in the School*** (3 credits)
This course focuses upon how children at the elementary- and secondary-school level are socialized for different work roles, and how work segregation has occurred on the basis of this process. The role of schools and curriculum, then, is examined in relation to cultural changes in social roles.

EDUC 324 ***Patterns of Educational Culture*** (3 credits)
This course is an introduction to the variety of cultural settings in which formal schooling and informal education socialization take place. The cultural milieu of education, both inside the classroom and outside, in the family, the neighbourhood, the market-place, and the political arena is the focus of readings and lectures.
The aim of this course is to immerse the student in the concepts of anthropology and education in the broadest sense. It is hoped that students become sensitized to the concept of culture, cultural assimilation, enculturation, socialization, informal, non-formal, and formal educational systems, open and closed societies, and cross-cultural comparison.

EDUC 371 ***Practicum II: Classroom Interaction Dynamics*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course is designed to encourage both systematic and anthropological observation of children in large and small groups in the classroom. Interaction between the child and the teacher as well as peer group interaction are examined. Sociolinguistics, verbal and non-verbal communication, and teacher expectations are topics covered. The purpose of this course is to heighten students' awareness of effective communication strategies and classroom interaction patterns. Classroom observation and student participation are the means by which topics are handled in the course. A one half-day per week field placement is required.

EDUC 373 ***Practicum III: Curriculum, Classroom Management and Micro-Teaching*** (3 credits)
Prerequisite: 30 credits in the Early Childhood Education Specialization. Students study curriculum development and classroom management at the pre-school level. Teaching skills are modelled and practised in microteaching sessions. Students plan and develop activities, lessons, and units, which they implement in the microteaching sessions. Videotapes of performance are reviewed and discussed.
NOTE: Students who have received credit for EDUC 270 may not take this course for credit.

EDUC 374 ***Child Studies Practicum*** (3 credits)
Prerequisite: 30 credits in the Major programme. This course is designed to provide students with training in observation and evaluation procedures. Students study children in a variety of child-oriented environments and programmes. Instruction focuses on evaluative methodology, e.g., observational methods and interactional analyses. Students are required to complete a one-half day per week internship in addition to the regularly scheduled class time. Appropriate field placements for this course include recreation/community centres, hospitals, daycare centres, libraries, museums, fine arts centres.
NOTE: Students who have received credit for EDUC 371 may not take this course for credit.

EDUC 380 ***Language Arts I*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. The aim of this course is to give the early childhood educator the skills to develop a stimulating and appropriate language arts programme for the classroom. Current theories of literacy development and implications for instruction are addressed. The course focuses on listening, speaking, reading and writing, with special emphasis on integrating language arts activities into all subject areas.

EDUC 381 ***Language Arts II*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course is a continuation of EDUC 380 with special emphasis on emergent writing and reading. The connection between writing and reading skills and techniques of observation and evaluation are presented.
NOTE: Students who have received credit for EDUC 386 may not take this course for credit.

EDUC 382 ***Teaching Science Concepts to Young Children*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course examines areas of science which are relevant to the young child and emphasizes the development of the spirit of scientific enquiry. Resource materials, teaching methodology and classroom activities for early childhood education (preschool and primary) are examined and evaluated. Assignments emphasize developing activities for classroom use.

EDUC 383 ***Promoting Moral and Spiritual Attitudes and Values in Young Children*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course is designed to introduce the early childhood teacher to the various issues involving the development of moral judgment and reasoning in the young child. Cultural, social, cognitive and emotional factors influencing the growth of morality are discussed. The major focus is on examining methods and techniques to enhance the personal development of positive social behaviours (i.e. helping, sharing, caring, etc.) in preschool and primary level children.

EDUC 384 ***Exploring the Human Sciences with the Preschool and Primary Age Child*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course examines the teaching of the human sciences to young children.

EDUC 385 ***Teaching a Second Language to Young Children*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course is designed to give teachers a background in current theories of language acquisition and second language learning. Teaching methodologies such as immersion, enrichment, core/complementary curricula are studied and resource materials are examined and evaluated. Assignments include the development of appropriate classroom activities for young children.

EDUC 387 ***Teaching Mathematics to Preschool and Primary Children I*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. Programmes and methodologies for teaching numerical concepts typically acquired by the preschooler and the primary child are studied and evaluated. Relevant resource materials are examined and assignments focus upon development of activities for the classroom.
NOTE: EDUC 387 and EDUC 388 are designed to provide teachers of young children with the background mathematical knowledge and teaching competencies necessary for the development of an exciting and creative mathematical programme in the classroom.

EDUC 388 ***Teaching Mathematics to Preschool and Primary Children II*** (3 credits)
Prerequisite: 30 credits in Early Childhood Education Specialization. This course concentrates on topics such as geometry, classification, measurement, mathematical language, and the use of the calculator. The use of manipulative aids in instructing young children is explored and illustrated. Relevant resource materials are examined and assignments focus upon the development of activities for classroom use.
NOTE: EDUC 387 and EDUC 388 are designed to provide teachers of young children with the background mathematical knowledge and teaching competencies necessary for the development of an exciting and creative mathematical programme in the classroom.

EDUC 389 ***Catholic Moral and Religious Teaching in the Context of Québec Schools*** (3 credits)

Prerequisite: 30 credits in Early Childhood Education Specialization or permission of the Department. This course is designed to provide early childhood educators with the skills to develop a programme of Catholic Moral and Religious instruction within the context of Québec schools. The school curriculum, resource materials and teaching methodologies for the primary and preschool child is studied.

EDUC 398 ***Selected Topics in Education*** (3 credits)

EDUC 399 ***Selected Topics in Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

EDUC 405 ***The T.V. Child — The Educational Implications of Children's Television Viewing Patterns*** (3 credits)

Prerequisite: 30 credits. This course examines the effects of television on children from a cognitive-developmental perspective. Learning theory, production techniques, cognitive theory (information processing) are the basis around which the examination of the communication process between the child and the media is examined. Both the positive and negative effects of television on children are considered. The concept of media literacy and classroom use of television is also discussed.

EDUC 413 ***Children's Behaviour Problems*** (3 credits)

Prerequisite: EDUC 210 or EDUC 211. This course focuses on the nature of children's behaviour problems and on methods to understand and modify behaviours which interfere with children's emotional, social, and intellectual growth. Students are involved with the practical applications of the available strategies in order best to help a youngster with behaviour problems according to their needs. Specific classroom techniques for coping with the acting-out as well as with the withdrawn child are given. Students are taught observational tools, programming suggestions, reinforcement techniques, and evaluation methods.

EDUC 414 ***Learning Problems of Children*** (3 credits)

Prerequisite: EDUC 210 or EDUC 211. This course describes the causes and kinds of learning problems in young and school-age children. Students are taught the pre-academic skills that are involved in learning, as well as specific techniques to help youngsters overcome and/or cope with these difficulties. Educational techniques for dealing with problems in reading, mathematics, spelling, writing, and language are discussed. The whole area of learning problems is related to children's social, emotional, and intellectual levels.

EDUC 416 ***Education of the Gifted*** (3 credits)

Prerequisite: EDUC 210. This course discusses the special educational problems of gifted children. It also assesses the effectiveness of the techniques usually employed to deal with these problems.

EDUC 417 ***Education of the Disadvantaged Child*** (3 credits)

Prerequisite: 30 credits. This course deals with issues associated with teaching disadvantaged children. Social, emotional, cognitive and familial problems are discussed and techniques for coping with these problems are presented.

EDUC 422 ***Sociology of Education I*** (3 credits)

Prerequisite: 30 credits. This course emphasizes sociological concepts and their application to the study of schooling. The focus is on the education system in relation to familial, economic and political aspects and how these affect social class differentials in educational achievement and social status position.

NOTE: Students who have received credit for EDUC 421 may not take this course for credit.

EDUC 423 ***Sociology of Education II*** (3 credits)

Prerequisite: EDUC 422. This course considers how a particular sociological viewpoint contributes to our understanding of school life. Topics include family, socialization patterns, teacher and pupil perspectives and how these are interrelated.

NOTE: Students who have received credit for EDUC 421 may not take this course for credit.

EDUC 426 ***Comparative Education I*** (3 credits)

Prerequisite: Six credits in Education. This course undertakes the study of the impact of political and cultural differences upon educational systems (for example, the impact of language differences, nationalism, colonialism, neocolonialism, political socialization). The approach is comparative, with particular emphasis on contrasting educational systems and practice in western nations (Canada, the United States, United Kingdom, or Western Europe); the Soviet Union; and China or other Third-World nations.

EDUC 427 ***Comparative Education II*** (3 credits)

Prerequisite: Six credits in Education. This course examines the sources and impacts of educational change from a comparative perspective. Topics include pedagogical alternatives; socio-political alternatives; educational implications of technological change and economic policy; policies of elitism and egalitarianism. Methods include comparative case study, and analysis of specific theories of educational innovation.

EDUC 428 ***Philosophy of Education: Concepts and Issues*** (3 credits)
Prerequisite: Three credits at university level in Philosophy or EDUC 230. The course considers the application of philosophical method to aspects of educational theory or practice, e.g., educational aims, teaching methods, concepts which occur in educational discourse, or educational controversies.

EDUC 429 ***Philosophy of Education: Educational Philosophers and Movements*** (3 credits)
Prerequisite: Three credits at university level in Philosophy or EDUC 230. The course makes a study of a philosopher or school of philosophy whose works include significant educational reference or implication: e.g., Plato, Aristotle, Rousseau, Dewey, Marxism, Utilitarianism, Modern Analytical Philosophy.

EDUC 431 ***Honours Essay in Education*** (6 credits)
Open to third-year students in Honours in Education and Philosophy (or to others by permission of the Department).

EDUC 432 ***Seminar in Epistemology and Education*** (3 credits)
Prerequisite: EDUC 430, or permission of the Department. Theories of knowledge are considered in this course, with special attention being given to the bearing of such topics as perception, evidence, truth, knowledge, and belief as relating to educational thought and practice. Students are expected to become familiar with recent periodical and other literature in the field.

EDUC 433 ***Seminar in Ethics and Education*** (3 credits)
Prerequisite: EDUC 430, or permission of the Department. Students in this course study the principles and methods of moral justification in education. They are referred to the writing of main authors and recent periodical literature.

EDUC 434 ***Seminar in Aesthetics and Education*** (3 credits)
Prerequisite: EDUC 430, or permission of the Department. The nature of aesthetic value and experience, and theories of art and beauty are examined. The development of the emotions and imagination, and their functions in aesthetic awareness are central concerns of this course. Students are expected to become familiar with the relevant literature in the field.

EDUC 435 ***Seminar in Philosophy and Education*** (3 credits)
Prerequisite: EDUC 430, or permission of the Department. This is an advanced seminar in philosophical analysis and theory, in which students present papers on, and conduct discussions about, educational concepts, aims, and practices. Students are expected to become familiar with the periodical and other literature in the areas under discussion.

EDUC 440 ***History of Education, Thought and Practice*** (3 credits)
Prerequisite: 30 credits. The course focuses on a selected theme, school of thought, or movement in education, and educational thought (e.g., "the education libertarians from Rousseau to Holt", "the evolution of the curriculum", "the origins of public education", etc.).
NOTE: Students who have received credit for EDUC 441 may not take this course for credit.

EDUC 442 ***Education in Canada*** (3 credits)
Prerequisite: Six credits in Canadian History. It is advisable that students have a reading knowledge of French. This course studies the history of Canadian education and, more particularly, the history of education in Québec.

EDUC 445 ***Education in Québec*** (3 credits)
Prerequisite: 30 credits in a teacher certification programme, or holder of a provisional teaching authorization or permission of the Department. This course covers the history, the contemporary movements and the structures of Québec education. The historical section covers the period from 1608 until the present. Topics included are the legislation, regulations, rules and directives pertaining to the respective roles of the Ministry of Education, the school boards, the teachers, the parents and the students in Québec's educational system.
NOTE: Because this is a required course for all individuals enrolled in a Québec programme of teacher training, the content is controlled by the Ministry of Education.

EDUC 471 ***Supervised Internship*** (6 credits)
This course is offered only to students enrolled in the Certificate in Education programme. Teaching internship is carried out in the school where the student is employed. The students are supervised and their teaching performance evaluated. The students are expected to demonstrate positive evidence of teaching competence and professional behaviour.

EDUC 473 ***Practicum IV: Early Childhood Education Kindergarten Internship*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization; 60 credits including EDUC 271, 371, 373. Students must be enrolled in EDUC 474 in the same semester. This course is a supervised kindergarten internship of five half-days a week for one semester. In addition, students are required to attend a weekly seminar with their faculty internship supervisor.
NOTE: Students who have received credit for EDUC 470 may not take this course for credit.

EDUC 474 ***Early Childhood Education Internship Teaching Seminar*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization; 60 credits including EDUC 271, 371,

373. Students must be enrolled in EDUC 473 in the same semester. This seminar focuses on topics relevant to the student-teaching experience, e.g., behaviour management, curriculum planning, teacher-parent relationships, and mainstreaming. Emphasis is on the refinement rather than the acquisition of knowledge and skills. The literature on effective teaching practices is examined and the relationship of theory to practice is discussed.
NOTE: Students who have received credit for EDUC 470 may not take this course for credit.

EDUC 475 ***Practicum V: Early Childhood Education Primary Internship*** (3 credits)
Prerequisite: Enrolment in Early Childhood Education Specialization; 60 credits including EDUC 271, 371, 373, 473, 474. This course involves a six-week (full days) supervised teaching internship in grades 1, 2 or 3.
NOTE: Students who have received credit for EDUC 472 may not take this course for credit.

EDUC 480 ***Special Methods of Teaching — Elementary*** (3 credits)
This course is offered only to students enrolled in the Certificate in Education programme. It deals with methods of teaching in the elementary school. Emphasis is placed on the practical application of educational theories.

EDUC 481 ***Special Methods of Teaching — Secondary*** (3 credits)
This course is offered only to students enrolled in the Certificate in Education programme. This course deals with methods of teaching in a high school subject. The course is designed to suit the individual student's field of specialization.

EDUC 490 ***Children with Health Problems and Handicaps I*** (3 credits)
Prerequisite: EDUC 211 or equivalent; 30 credits in Education or permission of the Department. This course offers a theoretical and practical introduction to the challenges facing children who have various disabilities or chronic illnesses. The course addresses the question: how can families, educators and others work towards the goal of equitable opportunity for these children? Topics include: attitudes, the normalization principle, education and life in the mainstream.

EDUC 491 ***Children with Health Problems and Handicaps II*** (3 credits)
Prerequisite: EDUC 490 or permission of the Department. This course is an exploration of children's experiences with illness, disability and health or medical care, and specific interventions which can foster coping, healthy development and family well-being. Topics include: cognitive and emotional preparation for stress-provoking events, the therapeutic use of play, creative expression, and special literature for children and youth. Laboratory work outside the class is required.

EDUC 498 ***Advanced Topics in Education*** (3 credits)

EDUC 499 ***Advanced Topics in Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.90.1 ADULT EDUCATION
(Andragogy)

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

42 *BA Major in Adult Education

**Admission suspended for 1991-92.*

Students must take:

6 ADED 201[3], 202[3]
15 Chosen from the Adult Education (ADED) offerings
3 Chosen from cognate courses with the permission of the Programme Director
6 ADED 495[6], an integrative seminar in the last year of the programme

30 Certificate in Adult Education

The Department of Education offers a 30-credit Certificate Programme and a 24-credit Minor in Adult Education consisting of both required and optional courses: core courses in the foundations of adult education, courses related to functions, skills and competencies of adult educators in the field of practice, and courses related to some dimensions which constitute the body of knowledge of adult education.

Certificate Admission Requirements
General admission requirements are listed in §13. Applicants will be interviewed prior to admission.

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined in consultation with the Programme Director at the point of entry into the programme.

24 Minor in Adult Education

6 ADED 201[3], 202[3]
18 Chosen from Adult Education (ADED) course offerings with the prior approval of the Adult Education Coordinator.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

ADED 201 ***Concepts and Principles of Adult Education*** (3 credits)
This course consists of an overview of the field of adult education as a field of study with emphasis given to its philosophy, objectives, historical development and the nature of adult learners. It also examines Adult Education as a field of practice with emphasis given to methods, techniques, roles and competencies. This course stresses active student participation and self-directedness.
NOTE: Students who have received credit for ADED 200 may not take this course for credit.

ADED 202 ***The Scope and Nature of Adult Education Programmes*** (3 credits)
The course is designed to help students develop an understanding of the scope and nature of adult education programmes. Emphasis is placed on existing programmes and institutions and agencies providing them. The course stresses active student participation and self-directedness.
NOTE: Students who have received credit for ADED 200 may not take this course for credit.

ADED 220 ***Adults as Learners*** (3 credits)
This course examines the unique physiological, psychological and sociological characteristics of adults, their influence on adult learning and development and their implications for educational intervention. Attention is given to changes which occur at various stages of the adult life cycle and particularly to the dimensions which affect the adult's self-concept and orientation to learning, the motivations, needs and interests which cause adults to participate in educational activities.

ADED 230 ***Roles and Competencies of Adult Educators*** (3 credits)
The purpose of this course is to review the state of professionalization of adult education. General skills, knowledge and attitudes expected of adult educators regardless of the setting in which they work are examined. In addition, according to the participants' needs and interests, an opportunity is given to explore competencies related to the particular roles of, e.g., administrators, programme developers, trainers, leaders, instructors, counsellors, and volunteer workers.

ADED 240 ***Introduction to Research in Adult Education*** (3 credits)
This course is designed to introduce students as to how to gain access to and utilize major information sources in Adult Education. In addition, the course examines research interests and problem areas studied in Adult Education and related fields, along with current trends and various methods of enquiry used.

ADED 298 ***Selected Topics in Adult Education*** (3 credits)

ADED 299 ***Selected Topics in Adult Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ADED 333 ***Methods and Techniques for Facilitating Adult Learning*** (3 credits)
This course is designed to give adult educators an opportunity to practise and improve their skills in facilitating adult learning. Different models of educational processes and optimal conditions for promoting adult learning are examined; attention is given to case studies, role plays and simulation methods and techniques, as well as to individualized learning formats.
NOTE: Students who have received credit for ADED 330 or 331 may not take this course for credit.

ADED 344 ***Design of Adult Learning Projects*** (3 credits)
The purpose of this course is to assist participants in developing a clear working concept of various models for planning and designing adult learning projects. To facilitate this understanding, the different steps of the process are closely examined and discussed. Participants are given an opportunity to design and conduct a learning activity. A systems approach, including methods for evaluating the design of the learning project is emphasized.
NOTE: Students who have received credit for ADED 340 or 341 or 343 may not take this course for credit.

ADED 345 ***Evaluating Adult Learning Projects*** (3 credits)
The purpose of this course is to assist participants in developing a clear working concept of various models for assessing the effectiveness of adult learning projects. The course emphasizes a systematic approach to evaluation, techniques for collecting information and providing feedback to programme operation and impact. Participants are given the opportunity to conduct an evaluation of an adult learning project.
NOTE: Students who have received credit for ADED 342 or 343 may not take this course for credit.

ADED 351 ***Introduction to Administration of Adult Education*** (3 credits)
This course is designed to develop a better understanding of the principles of organization and administration as they relate to various institutions, government agencies, schools and hospitals. The course also examines the evolving relationships of administrative theory and practice.

ADED 370 ***Workshops for Adult Educators*** (3 credits)
These workshops examine a number of topics and problems related to the field of Adult Education. The issues considered may differ from year to year and will be stated in the Undergraduate Class Schedule.

The workshop format is designed to provide adult educators with learning opportunities that are flexibly scheduled or in the form of a one-week intensive seminar.

ADED 398 ***Selected Topics in Adult Education*** (3 credits)

ADED 399 ***Selected Topics in Adult Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ADED 410 ***Adult Education in Canada and Québec*** (3 credits)
The purpose of this course is to examine the historical development and current state of adult education in Canada, with special reference to Québec. Various factors which influenced the development of adult education in our society are explored; the focus is on present status, role and structure, and socio-cultural and philosophical underpinnings of the field.

ADED 412 ***Concepts and Values in Adult Education*** (3 credits)
This seminar is designed to encourage adult educators to reflect upon and question what one is engaged in and why. A selection of conceptual and philosophical issues underlying adult educational practice is critically examined and discussed. Attention is given to the meaning of words, the nature of ideas and values, the implications of assumptions and principles which are deemed specific in the sphere of the education of adults.

ADED 440 ***Issues in the Practice of Adult Education*** (3 credits)
The purpose of this seminar is to study and discuss current issues relating to the field and profession of adult education in general, along with more specific and local concerns. Group and individual interests have an important bearing on the design of this course.

ADED 450 ***Adulthood and the Process of Educational Change*** (3 credits)
This course examines research literature on the impacts of changes in perception, attitudes, abilities and needs associated with the adult life cycle; and the literature on the impact of institutionalization on adult learners. The course presents a more advanced examination of issues covered in ADED 220, such as: effect of changes in the adult life cycle on instructional methods; effects of changes in institutional policies and organization on educational opportunities for the adult learner.

ADED 495 ***Integrative Seminar*** (6 credits)
Prerequisite: ADED 201; ADED 202; permission of the Programme Director. This seminar, to be taken during final year in the programme, is designed to assist individual students in achieving a synthesis of their own experience in the light of acquired knowledge, skills, values and attitudes. The purpose of this course is to help participants to clarify their aims and to structure their personal philosophy of adult education.

ADED 498 ***Advanced Topics in Adult Education*** (3 credits)

ADED 499 ***Advanced Topics in Adult Education*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.100 English

Chair
GERALD M. AUCHINACHIE, *Associate Professor*

Professors
HENRY BEISSEL
ROSLYN BELKIN
MERVIN BUTOVSKY
HOWARD FINK
MALCOLM FOSTER
GARY GEDDES
JUDITH S. HERZ
DAVID KETTERER
ROBERT K. MARTIN
EDWARD PECHTER
ROBERT PHILMUS

Associate Professors
ROBERT ALLEN
MICHAEL BRIAN
ARTHUR BROES
LASZLO GEFIN
HARRY HILL
STANTON HOFFMAN
LEONARD R. MENDELSOHN
ALEX NEWELL
LAWRENCE P. NOWICKI
MARIA PHILMUS
LEWIS J. POTEET
EYVIND C. RONQUIST
G. DAVID SHEPS
RICHARD J. SOMMER
JOHN R. SORFLEET
RONALD S. WAREHAM
KATHERINE E. WATERS

Assistant Professors
NICOLE DIDICHER
MARY DiMICHELE
LAURA GROENING
JOHN H. STAPE

Special Lecturer
JOHN MILLER

Lecturer
TERENCE BYRNES

Canada Research Fellow
BINA FREIWALD

Writer-in-Residence
VITTORIO ROSSI

ADMISSION REQUIREMENTS FOR CREATIVE WRITING COURSES AND PROGRAMMES

Genre courses in Creative Writing are conducted as workshops in which enrolment is limited to permit constructive analysis of a student's work. Students wishing to enter any introductory genre course in Creative Writing (225, 226, 227) must apply by submitting a letter of intent along with a portfolio consisting ordinarily of 20 pages of their own work in any genre. Applications will be received as early as January of each year but no later than March 15. Since student demand regularly outpaces our enrolment capacity, early application is advisable.

Creative Writing programmes (Major and Minor) are designed primarily to develop the literary skills of students with a commitment to writing as an art form. Structured workshops guide students from introductory to advanced levels through the practice of their craft under the supervision of experienced writers.

Students wishing to proceed to an advanced (400-level) workshop must achieve a final grade of B- or better in an introductory workshop in Creative Writing.

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

REQUIREMENTS FOR ENGLISH LITERATURE MAJOR

All students entering the English Literature Major must take a special Composition placement test which includes a literary component. Depending on the results of the test, students will be granted exemption from the Composition requirement, or placed according to their levels in, initially, one of ENGL 208, ENGL 212, or ENGL 213. (Some sections of ENGL 212 and ENGL 213 are specially designated for English Majors.) Credits in ENGL 212 and ENGL 213 count as elective credits toward the programme total; credits in ENGL 208 count towards the BA but not towards the programme total. The Composition requirement has to be satisfied in the first year of enrolment in the programme. Note also the Genre and Critical Method requirements of the programme.

ADMISSION REQUIREMENTS FOR JOINT SPECIALIZATION IN PLAYWRIGHTING (ENGLISH AND THEATRE)

This Programme is intended for a very few exceptionally talented students each year. Students wishing to enrol in this programme should make an application to either the Major in Creative Writing or the Major in Theatre (Department of Theatre). In either case, in consultation with their advisers, they should select courses which

satisfy the requirements for both the Departmental Major and for the Joint Specialization. Permission to transfer to the Joint Specialization and to enrol as student playwrights in THEA 420 Playwrighting Workshop is normally granted when students enter their final 30 credits and is based upon successful completion of ENGL 227 Creative Writing: Drama and ENGL 427 Advanced Creative Writing: Drama, review of the student's writing to date, and an interview. Students who are refused permission to transfer to the Joint Specialization should expect to complete the requirements for the Departmental Major in which they originally enrolled.

Students are responsible for satisfying their particular degree requirements.

The superscript indicates credit value.

Students should consult the annual English Department brochure to determine which of the following courses are being offered in any given year.

60 BA Honours in English Literature

12 Genre, critical reading and survey courses from ENGL 256^6, 257^3, 258^3, 263^6, 271^3, 273^3, 275^3, 277^3, 280^3, 281^6, 282^6, 283^6, 284^6, 384^3
(To be taken within the first 24 credits in English)

6 Early, medieval and 16th century from ENGL 262^6, 310^6, 315^6, 316^3, 317^3, 318^6, 430^6, 432^6

6 17th and 18th centuries from ENGL 320^6, 326^6, 327^3, 328^3, 332^6, 333^3, 334^3, 335^3, 347^6

6 Romantic and Victorian to be chosen from ENGL 338^6, 339^3, 340^3, 342^6, 343^3, 344^3, 348^6

6 Modern Literature from ENGL 305^6, 306^6, 307^3, 308^3, 355^3, 356^6, 357^3, 359^3, 366^3, 390^6, 392^6

6 Canadian Literature to be chosen from ENGL 290^6, 293^3, 370^6, 371^3, 372^3, 375^6, 379^3

3 American Literature to be chosen from ENGL 300^6, 301^3, 303^3, 309^3, 311^6, 365^3, 367^3, 369^3

3 ENGL 470^3

12 ENGL electives from ENGL 224 to ENGL 499

54 BA Specialization in English Literature

12 Genre, critical reading and survey courses from ENGL 256^6, 257^3, 258^3, 263^6, 271^3, 273^3, 275^3, 277^3, 280^3, 281^6, 282^6, 283^6, 284^6, 384^3
(To be taken within the first 24 credits in English)

6 Early, medieval, 16th century, 17th century and 18th century from ENGL 262^6, 310^6, 315^6, 316^3, 317^3, 318^6, 320^6, 326^6, 327^3, 328^3, 332^6, 333^3, 334^3, 335^3, 347^6, 430^6, 432^6

6 Romantic and Victorian from ENGL 338^6, 339^3, 340^3, 342^6, 343^3, 344^3, 348^6

6 Modern Literature from ENGL 305^6, 306^6, 307^3, 308^3, 354^3, 356^6, 357^3, 359^3, 366^3, 390^6, 392^6

6 Canadian Literature from ENGL 290^6, 293^3, 370^6, 371^3, 372^3, 375^6, 379^3

3 American Literature from ENGL 300^6, 301^3, 303^3, 309^3, 311^6, 365^3, 367^3, 369^3

15 ENGL electives from ENGL 224 to ENGL 499

42 BA Major in English Literature

9 Credits in genre and critical method chosen from ENGL 271^3, 273^3, 275^3, 277^3, 280^3, 281^6, 282^6, 284^6 (at least 3 credits to be taken in the first year of study; the remaining 6 to be taken within the first 15 credits in English)

12 Credits in English Literature period courses chosen from ENGL 310^6 through 344^6, 430^6, 432^6

21 Electives: Any English course from ENGL 212 to ENGL 499

60 BA Honours in English and Creative Writing

12 Chosen from ENGL 225^6, 226^6, 227^6

6 Chosen from ENGL 425^6, 426^6, 427^6

6 Chosen from ENGL 410^6, 411^6, 412^6, 413^6, 414^6

6 Chosen from ENGL 224^3, 398^{3*}, 410^6, 411^6, 412^6, 413^6, 414^6, 425^6, 426^6, 427^6, 470^3

6 Genre, critical reading and survey courses from ENGL 256^6, 257^3, 258^3, 263^6, 271^3, 273^3, 275^3, 277^3, 280^3, 281^6, 282^6, 283^6, 284^6, 384^3
(To be taken within the first 24 credits in English)

12 a) Early, medieval and 16th century from ENGL 262^6, 310^6, 315^6, 316^3, 317^3, 318^6, 430^6, 432^6
b) 17th century and 18th century from ENGL 320^6, 326^6, 327^3, 328^3, 332^6, 333^3, 334^3, 335^3, 347^6
c) Romantic and Victorian from ENGL 338^6, 339^3, 340^3, 342^6, 343^3, 344^3, 348^6
(No more than 6 credits from any of the three sections)

6 Modern British, European, Anglo-Irish and American from ENGL 300^6, 301^3, 303^3, 305^6, 307^3, 308^3, 309^3, 311^6, 355^3, 356^6, 357^3, 359^3, 365^3, 366^3, 367^3, 369^3, 390^6, 392^6

6 Canadian Literature from ENGL 290^6, 293^3, 370^6, 371^3, 372^3, 375^6, 379^3

**NOTE: With Departmental approval when the subject is designated as appropriate for the Creative Writing Option.*

42 BA Major in Creative Writing*

12 Chosen from ENGL 225^6, 226^6, 227^6

6 Chosen from ENGL 425^6, 426^6, 427^6

6 Chosen from ENGL 410^6, 411^6, 412^6, 413^6, 414^6, 425^6, 426^6, 427^6

6 Credits in Canadian Literature

12 ENGL elective credits in literature courses.

**NOTE: Students wishing to register for the Major in Creative Writing should refer to the Admissions Requirements for Creative Writing Courses and Programmes.*

30 Minor in Creative Writing

12 Chosen from ENGL 225^6, 226^6, 227^6

12* Chosen from ENGL 410^6, 411^6, 412^6, 413^6, 414^6, 425^6, 426^6, 427^6

6 ENGL elective credits

Students wishing to register for the Minor in Creative Writing should refer to the Admission

Requirements for Creative Writing Courses and Programmes.
**NOTE: At least 6 credits in this group must be chosen from 425[6], 426[6], or 427[6]*

24 Minor in English Language
24 Chosen from ENGL 255[6], 256[6] or 257[3] and 258[3], 310[6], 384[3], 393[3], 394[3], 396[6], 430[3], 432[6], 477[3]

24 Minor in English Literature
24 ENGL elective credits in literature courses*
**Students are encouraged to consult with the Department in selecting their courses.*

24 Minor in English Dramatic Literature
6 ENGL 320[6]
18 Chosen from ENGL 227[6], 427[6], or English elective credits in dramatic literature

72 BA Joint Honours in English and French
6 ENGL credits chosen from courses 256 through 284
6 ENGL credits chosen from courses 290[6], 293[3], 298[3], 299[6], 300[6], 301[3], 303[3], 305[6], 306[6], 311[6], 356[6], 357[3], 358[3], 360[3], 361[3], 370[6], 371[3], 372[3], 375[6], 390[6], 392[6]
6 ENGL 310[6], 316[3], 320[6], 327[3], 328[3]
12 ENGL credits chosen by genre or periods to parallel choice in French courses to be chosen in consultation with the departments
18 FRAN 251[6], or 252[3] and 253[3], 270[3], 271[3], 320[6], or 321[3] and 322[3], 402[6]
12 FRAN credits chosen by genre or periods to parallel choice in English courses to be chosen in consultation with the departments
6 Elective credits in English or French, outside the parallel periods or genres chosen
6 ENGL 473[6] or FRAN 496[6]*
**NOTE: Students intending to take FRAN 496[6] should note that it has a 400-level prerequisite. Six of the twelve FRAN elective credits should therefore be chosen at the 400 level.*
NOTE: Prior to registration students must have written approval for their programme from an authorized member of the Department.

60 BA Joint Specialization in English and History
6 Genre, critical reading and survey courses from ENGL 256[6], 257[3], 258[3], 271[3], 275[3], 277[3], 280[3], 281[6], 282[6], 283[6], 284[6] (to be taken in the first 24 credits in the programme)
6 Periods before 1800 (British and European) from ENGL 310[6]; ENGL 315[6] through ENGL 318[6]; from ENGL 320[6] through ENGL 335[3]
6 North American (Canadian and American) from ENGL 290[6], 293[3], 300[3], 301[3], 309[3], 311[6], 365[3], 367[3], 369[3], 370[6], 371[3], 372[3], 375[6], 379[3]
6 19th Century and 20th Century (British and European) from ENGL 305[6], 306[6], 307[3], 308[3], 338[6], 339[3], 340[3], 342[6], 343[3], 344[3], 348[6], 352[3], 353[3], 355[3], 356[6], 357[3], 358[3], 359[3], 366[3], 390[6], 392[6], 459[6]
6 ENGL elective credits from ENGL 224 to ENGL 499
18 HIST credits chosen from two different historical periods to parallel English courses to be chosen in consultation with the departments
12 HIST elective credits

60 BA Joint Specialization in Playwrighting (English and Theatre)*
12 Theatre 240[6], 420[6]
3 Theatre Performance 201[3], 211[3]
3 Production 311[3]**
12 Department of Theatre electives
12 ENGL 227[6], 427[6]
12 Electives in drama, chosen from ENGL 235[3], 236[3], 267[6], 277[3], 318[6], 320[6], 335[3], 369[3], 379[3], 392[6]. At least 3 credits must be in twentieth-century drama
6 Electives in English Literature or Creative Writing

**See Admissions Requirements for Joint Specialization in Playwrighting (English and Theatre).*

***NOTE: Students in Playwrighting are given an assignment of an appropriate dimension.*

200-level courses and 300-level courses without prerequisite are open to all students and may be used as English electives unless otherwise indicated.
Admission to the Honours programme is granted at the end of the student's first year, after Departmental review. Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)
Written work may be required in English for these courses; please consult with the Department.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

ENGL 205 ***Basic Language Skills — Stage I*** (3 credits)
A course for native speakers of English who need basic training in written English. Emphasis is placed on grammar, sentence structure, paragraphing and other fundamentals of good usage.
NOTE 1: Students who have received credit for any ESL course may not take this course for credit. This course does not count for credit within any English programme.
NOTE 2: Students must take a placement test before registering for this course.

ENGL 206 ***Basic Language Skills — Stage II*** (3 credits)
Prerequisite: ENGL 205. A course for native speakers of English who need basic training in written English. This course is a continuation of ENGL 205.
NOTE: Students who have received credit for any ESL course may not take this course for credit. This course does not count FOR credit within any English programme.

ENGL 208 ***Introduction to English Composition and Literary Analysis*** (6 credits)
A composition course for students who wish to improve their ability to engage in written analysis of literary texts. The course includes analysis of fiction, poetry, and literary essays.
NOTE 1: This course does not count for credit within any English programme.
NOTE 2: Students must take a placement test before registering for this course.

ENGL 209 ***Elements of Written English*** (3 credits)
This course is intended for students who have completed ENGL 205 and ENGL 206 or ESL 209 but who are not yet ready for ENGL 212. The course provides additional practice in English composition with emphasis on idiomatic expression and correct usage.
NOTE 1: Students who have received credit for this course may not subsequently take any ESL course or ENGL 205 or ENGL 206. This course does not count for credit within any English programme.
NOTE 2: Students must take a placement test before registering for this course.

ENGL 212 ***English Composition — Stage I*** (3 credits)
This course is designed to help the student write clearly, concisely, grammatically and in a logically organized way. Emphasis is placed on diction, sentence structure, paragraphing and the organization of compositions and book reports.
NOTE 1: Students who have received credit for this course may not subsequently take any ESL course or ENGL 205, ENGL 206 or ENGL 209.
NOTE 2: Unless ENGL 209 has been completed previously, students must take a placement test before registering for this course.
NOTE 3: A GRADE OF C- OR HIGHER IN THIS COURSE CONSTITUTES A PASS IN THE UNIVERSITY WRITING TEST.

ENGL 213 ***English Composition — Stage II*** (3 credits)
Prerequisite: ENGL 212. This course develops further the writing skills acquired in ENGL 212. The main purpose is to familiarize students with the techniques necessary for the preparation of research papers and academic reports.
NOTE: Students who have received credit for this course may not subsequently take any ESL course or ENGL 205, ENGL 206, or ENGL 209.

ENGL 224 ***The Creative Process*** (3 credits)
This is a series of lectures and discussions on aspects of the writing life, including technique, literary influences, sources of inspiration, revision, and process. Material is drawn from texts, letters, worksheets, and biographies of well-known poets, prose writers, and playwrights, as well as from the instructor's own experience.
Students are invited to read widely, participate in discussions, write papers, and engage in some writing of poetry, fiction, or drama. This course is open to all students.

NOTE: Students wishing to register for ENGL 225, 226 or 227, please refer to admission requirements for Creative Writing.

ENGL 225 ***Creative Writing: Poetry*** (6 credits)
A seminar in the writing and criticism of poetry, including detailed discussion and written criticism of the students' work, and, at the discretion of the instructor, the study of selected poems.

ENGL 226 ***Creative Writing: Prose*** (6 credits)
A seminar in the techniques of short fiction, including investigations of and exercises in a variety of creative and technical problems, as well as analysis and criticism of the students' own work. Students may be required to read selected works of short fiction.

ENGL 227 ***Creative Writing: Drama*** (6 credits)
A seminar in the writing of plays, including an exploration of dramatic forms and techniques. The students are expected to submit work of their own for discussion and analysis.

ENGL 232 ***The Oral Interpretation of Poetry and Drama*** (6 credits)
The aim of this course is to demonstrate the close relationship between the rhythm and texture of the spoken word and meaning in poetry and drama. Poems and scenes from plays are read aloud, studying the importance of emphasis to meaning and (in the latter) the relationship of dialogue to character.

ENGL 235 ***Plays of the Renaissance Theatre*** (3 credits)
Designed as an introduction to Renaissance drama, this course is a study of representative sixteenth- and seventeenth-century plays by such writers as Marlowe, Shakespeare, Jonson, Webster and Molière.
NOTE: This course may not be taken for credit with ENGL 318.

ENGL 236 ***Plays of the Modern Theatre*** (3 credits)
Designed as an introduction to modern drama, this course is a study of some representative modern plays by such writers as Ibsen, Chekhov, Shaw, O'Neill, Williams, Synge, Beckett and Pinter.
NOTE: This course may not be taken for credit with ENGL 392.

ENGL 237 ***Children's Literature*** (6 credits)
A survey and analysis of literature for children, undertaken with the aim of developing a critical vocabulary,

and of arriving at workable standards of assessment. The kinds of literature discussed include works written for adults, but traditionally read by children as well, works specifically written or adapted for children, fairy tales, and other children's versions of folklore and myth, nursery rhymes, and other children's verse. The course will be of general interest to students of literature, and should prove especially helpful to those who teach children in the schools.

ENGL 238 ***Canadian Children's Literature*** (3 credits)
This course examines the ways in which elements of the Canadian experience, such as language, setting, folklore, and history, have contributed to the content and tradition of children's literature in Canada.

ENGL 248 ***Women Reading/Writing: Feminist Literary Criticism*** (6 credits)
This course conducts a historical and critical investigation of women's writing. It explores the relationships between women's experiences and ideologies of gender, on the one hand, and literary themes, conventions, and the institutions of literary production, on the other. The course also familiarizes students with the theoretical frameworks which inform the study of women in culture and society. Issues of interest include: writing and women's history; gender and reading; the Lesbian literary tradition; the intersections of race, class and gender; psychoanalysis and feminism; feminist-materialist theory; subjectivity and subjection.

ENGL 254 ***Psychology and Literature*** (6 credits)
A study of the relationship between the basic theories of psychology or psychoanalysis and literature through a consideration of selected literary works, such as novels, poems, dramas, and fairy tales.

ENGL 255 ***Translation*** (6 credits)
Prerequisite: Fluency in both French and English. Intensive work to improve the student's skill at translating a variety of texts from French to English. Emphasis is placed on non-literary texts. Training is given in style and idiom. The course helps the student gain proficiency in rendering a variety of French texts into idiomatic English prose.

ENGL 256 ***Major Writers in English*** (6 credits)
An introduction to major periods of English literature through the study of such representative authors as Chaucer, Shakespeare, Marlowe, Jonson, Donne, Milton, Swift, Pope, Blake, Coleridge, Wordsworth, Keats, Shelley, Dickens, Hardy, Browning, Tennyson, Conrad, Lawrence, Yeats, Eliot, Woolf, Joyce.
NOTE: This course may not be taken for credit with ENGL 257 or 258.

ENGL 257 ***Introduction to English Literature I*** (3 credits)
An introduction to Chaucer, Spenser, Shakespeare, Milton, and other major English authors of the Middle Ages and the sixteenth and seventeenth centuries.
NOTE: This course may not be taken for credit with ENGL 256 and 268.

ENGL 258 ***Introduction to English Literature II*** (3 credits)
A continuation of ENGL 257. An introduction to Swift, Pope, Wordsworth, Tennyson, Yeats, T.S. Eliot, and other major English authors of the eighteenth, nineteenth and twentieth centuries.
NOTE: This course may not be taken for credit with ENGL 256.

ENGL 260 ***Myth and Ideas in Literature*** (6 credits)
The sources, literary development, and continuing functions of some of the myths which generate our ideas, and some of the ideas which rationalize our myths. In various years the emphasis may be on the history, structure, or continuing creation of myth and idea.
NOTE: Students who have received credit for ENGL 259 may not take this course for credit.

ENGL 262 ***Medieval Literature in Translation*** (6 credits)
An introductory study of some major works in England and Europe between 400 and 1400, beginning with St. Augustine, and including examples of epic, Grail literature, and courtly romance such as *Beowulf, The Song of Roland, The Cid,* Chrétien de Troyes' *Parsifal, Tristan and Isolde, The Romance of the Rose,* and parts of Dante's *Divine Comedy.*

ENGL 263 ***European Literature from the Middle Ages to the Onset of Modernism*** (6 credits)
A study of some of the classical works of European literature from Dante to Dostoevsky, including such writers as Boccaccio, Rabelais, Cervantes, Rousseau, and Goethe, with emphasis on evolving cultural patterns leading from Faith to Reason, and beyond.

ENGL 267 ***The Origins of Drama*** (6 credits)
An introductory study of Greek and Roman dramatists, and the medieval drama, both English and Continental. The course is concerned with dramatic types, theory and form, and with the significance of this drama to the later English stage.

ENGL 268 ***Masterpieces of English Literature before 1603*** (6 credits)
An introduction to the origin and development of English literature in the Old English, Medieval, and Tudor periods, through a reading of *Beowulf* (in translation), and authors such as Chaucer, Malory, Spenser, More, and Marlowe.
NOTE: This course may not be taken for credit with ENGL 257 and ENGL 318.

ENGL 271 ***Critical Reading*** (3 credits)
A course in practical criticism and evaluation of a variety of literary texts. Students develop their ability to respond to literature clearly and precisely.

ENGL 273 ***Fiction*** (3 credits)
A study of the novel as a literary genre through the reading of novels by authors such as Defoe, Fielding, Austen, Dickens, and Joyce.

ENGL 275 ***Poetry*** (3 credits)
A study of poetry and its forms, with emphasis upon the art of close reading.

ENGL 277 ***Drama*** (3 credits)
A study of a varied selection of plays from both a historical and a generic point of view that introduces students to the problems and delights of reading, visualizing, making and seeing plays.

ENGL 280 ***Short Fiction*** (3 credits)
A study of forms and techniques of the short story, the novella, and what have come to be called in contemporary literature, "fictions".

ENGL 281 ***Tragedy*** (6 credits)
A study of the varieties of tragic form and sensibility in Western literature. The course includes writers chosen from antiquity to the present, both inside and outside the English tradition, such as Shakespeare, Euripides, Hardy, Tolstoy, Webster, Racine, Faulkner, Buchner, Rilke, and Chekhov.

ENGL 282 ***Comedy*** (6 credits)
A study of the nature and varieties of comic form and sensibility in Western literature. The course includes writers chosen from antiquity to the present, both inside and outside the English tradition, such as Aristophanes, Cervantes, Jonson, Molière, Sterne, Gogol, Leacock, Amis, and Muriel Spark.

ENGL 283 ***Satire*** (6 credits)
A study of the nature and varieties of satire. The course includes writers chosen from antiquity to the present, both inside and outside the English tradition, such as Juvenal, Lucian, Chaucer, Erasmus, Swift, Voltaire, Orwell, Waugh, Beckett, Roth, Richler, and Grass.

ENGL 284 ***Critical Approaches to Literature*** (6 credits)
The practical application to selected works of literature of some of the fundamental methods of criticism such as the psychological, sociological, formalist, archetypal and structural.

ENGL 290 ***Canadian Literature*** (6 credits)
An introductory survey of Canadian prose and poetry, written in or translated into English, from their origins to the present.
NOTE: This course may not be taken for credit with either ENGL 291 or 292.

ENGL 293 ***Recent Experiments in Canadian Writing*** (3 credits)
A study of recent works of poetry, fiction, and drama, some of which break with traditional notions of genre, form and content. Attention is paid to the works of authors such as Kroetsch, Ondaatje, Kogawa, Findley, Walker, Tremblay and Marlatt.

ENGL 298 ***Selected Topics in English*** (3 credits)

ENGL 299 ***Selected Topics in English*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ENGL 300 ***American Literature*** (6 credits)
A survey of the literature of the United States, beginning with the early writers and their optimistic vision of a new society, and studying such problems as the transformation and inversions of the "American Dream" in such writers as Poe, Hawthorne, Melville, Twain, Whitman, and Fitzgerald.
NOTE: This course may not be taken for credit with ENGL 301 or 311.

ENGL 301 ***American Literature: Nineteenth Century*** (3 credits)
A study of major nineteenth-century American writers such as Poe, Thoreau, Emerson, Hawthorne, Melville, Whitman, and Dickinson.
NOTE: This course may not be taken for credit with ENGL 300.

ENGL 303 ***Modern American Literature*** (3 credits)
A study of American literature in the first half of the century by authors such as Fitzgerald, Faulkner, Richard Wright, O'Connor, H. D., Stevens, William Carlos Williams, Moore, O'Neill, and Tennessee Williams.
NOTE: This course may not be taken for credit with ENGL 311.

ENGL 305 ***Modern European Literature*** (6 credits)
A survey of some of the major European writers (in translation) of the last hundred years, including such writers as Dostoevsky, Kafka, Mann, Strindberg, Valéry, Pirandello, Sartre, de Beauvoir, and Brecht.

ENGL 306 ***Modern British and American Literature*** (6 credits)
A study of works in English from what has now emerged as the "Modern" period, extending from the turn of the century to World War II, and including such writers as Conrad, Joyce, Lawrence, Eliot, Yeats, Dylan Thomas, Stevens, Hemingway, Faulkner, Frost, Mansfield, and Bowen.
NOTE: Students who have received credit for ENGL 304 may not take this course for credit.

ENGL 307 ***Modern Fiction I*** (3 credits)
A study of major American and European fiction writers of the earlier modern period, such as Melville, Dostoevsky, Tolstoy, James, Kafka, Joyce, Mann, and Faulkner.
NOTE: Students who have received credit for ENGL C297 may not take this course for credit.

ENGL 308 ***Modern Fiction II*** (3 credits)
A study of major American and European fiction writers of the later modern period such as Malraux, Camus, Flannery O'Connor, Solzhenitsyn, Bellow, Pynchon, Marquez, and Calvino.
NOTE: Students who have received credit for ENGL C298 may not take this course for credit.

ENGL 309 ***Contemporary American Literature*** (3 credits)
A study of American Literature in the last half of the century by authors such as Burroughs, Bellow, Barthelme, Morrison, Plath, Bishop, Ashbery, Albee, Mamet, and Shepard.
NOTE: This course may not be taken for credit with ENGL 311.
NOTE: Students who have received credit for ENGL 319 may not take this course for credit.

ENGL 310 ***Chaucer*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of the major poetry of Chaucer, emphasizing *The Canterbury Tales* and *Troilus and Criseyde.*

ENGL 311 ***American Literature: Twentieth Century*** (6 credits)
A study of major twentieth-century American writers such as Fitzgerald, Hemingway, Faulkner, Stevens, Frost, Porter, and Plath.
NOTE: This course may not be taken for credit with ENGL 303 and ENGL 309.
NOTE: Students who have received credit for ENGL 302 may not take this course for credit.

ENGL 315 ***Sixteenth-Century Literature*** (6 credits)
Prerequisite: Six credits in English Literature and permission of the Department. A study of sixteenth-century literature as represented by such writers as Wyatt, Sidney, Spenser, More, Bacon, and Marlowe; and by drama to revenge tragedy.
NOTE: This course may not be taken for credit with ENGL 316 and 317.

ENGL 316 ***Spenser*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. This course is intended to examine Spenser's works—*The Amoretti* and *The Faerie Queene* in particular — and their relations to the pertinent literary traditions, both English and continental.

ENGL 317 ***Elizabethan Prose and Poetry*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. Significant works of Elizabethan non-dramatic literature are studied both as individual creations and as samples of the most important trends in non-dramatic verse and prose of the time.
NOTE: This course may not be taken for credit with ENGL 315.

ENGL 318 ***English Renaissance Drama*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. The golden age of English drama from 1485 to 1642; the Tudor interlude; the development of comedy, tragedy and other dramatic forms in the Elizabethan and Jacobean periods. Plays are selected from authors such as Peele, Kyd, Greene, Marlowe, Chapman, Dekker, Middleton, Jonson, Beaumont and Fletcher, Webster, Marston, Ford, and Shirley. Some consideration is given to Shakespeare.
NOTE: This course may not be taken for credit with ENGL 235.

ENGL 320 ***Shakespeare*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of Shakespeare's artistic achievement and its background. Works are chosen from different periods and genres.

ENGL 326 ***Seventeenth-Century Literature*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. This course places major emphasis on the poetry of Milton. Poetry and prose are selected from among such writers as Jonson, Donne, Herbert, Browne, Marvell, and Herrick.
NOTE: This course may not be taken for credit with ENGL 327 or 328.

ENGL 327 ***Seventeenth-Century Poetry*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of the lyrics of such poets as Jonson, Donne, Herbert, Marvell, and Traherne.
NOTE: This course may not be taken for credit with ENGL 326.

ENGL 328 ***Milton: Paradise Lost*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. This course studies *Paradise Lost* in detail and may include a consideration of other works by Milton.
NOTE: This course may not be taken for credit with ENGL 326.

ENGL 329 ***Milton II: Paradise Regained, and Other Writings*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. This course examines Milton's work in a variety of genres: tragedy (*Samson Agonistes*), post-1645 sonnets, epic (*Paradise Regained*), and selections from the prose essays and tracts.

ENGL 332 ***Literature of the Restoration and Eighteenth Century*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of poetry and prose from the 1660's to the 1780's, including such major writers as Dryden, Swift, Pope, and Johnson.
NOTE: A maximum of 6 credits may be taken from ENGL 332, 333, and 334.

ENGL 333 ***Literature of the Restoration and Early Eighteenth Century*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. Major Augustan authors, including Dryden, Swift, and Pope.
NOTE: A maximum of 6 credits may be taken from ENGL 332, 333, and 334.

ENGL 334 ***Eighteenth-Century Literature*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of major authors of the eighteenth century, such as Swift, Richardson, Fielding, and Johnson.
NOTE: A maximum of 6 credits may be taken from ENGL 332, 333, and 334.

ENGL 335 ***Restoration and Eighteenth-Century Drama*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of the English stage from Dryden to Sheridan, including such dramatists as Etherege, Otway, Wycherley, Vanbrugh, Congreve, Gay, Lillo, and Goldsmith.

ENGL 338 ***Literature of the Romantic Period*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of poetry and prose, chiefly that of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats.
NOTE: A maximum of 6 credits may be taken from ENGL 338, 339, and 340.

ENGL 339 ***The Romantics I*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. The course surveys the major poets of the first part of the Romantic period (Blake, Wordsworth, Coleridge), with historical background and emphasis on the common technical and thematic elements of Romantic poetry.
NOTE: A maximum of 6 credits may be taken from ENGL 338, 339, and 340.

ENGL 340 ***The Romantics II*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. The course surveys the major poets of the second part of the Romantic period (Byron, Shelley, and Keats), with historical background and emphasis on the common technical and thematic elements of Romantic poetry.
NOTE: A maximum of 6 credits may be taken from ENGL 338, 339, and 340.

ENGL 342 ***Victorian Literature*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of English poetry and prose from the 1830's to the end of the nineteenth century, including such major writers as Tennyson, R. Browning, Hopkins, Carlyle, Gaskell, Ruskin, Dickens, Thackeray, and George Eliot.
NOTE: A maximum of 6 credits may be taken from ENGL 342, 343,and 344.

ENGL 343 ***Victorian Prose*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of Victorian prose writers such as Dickens, George Eliot, Thackeray, Carlyle, Newman, Arnold, and Mill.
NOTE: A maximum of 6 credits may be taken from ENGL 342, 343, and 344.

ENGL 344 ***Victorian Poetry*** (3 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of Victorian poets such as Tennyson, Browning, Hopkins, Swinburne, and Hardy.
NOTE: A maximum of 6 credits may be taken from ENGL 342, 343, and 344.

ENGL 347 ***English Fiction from Defoe to Scott*** (6 credits)
A study of the origins and early development of English fiction, focussing on such forms as the epistolary, the picaresque, the Gothic and the historical novel, and such writers as Defoe, Fielding, Richardson, Smollett, Sterne, Radcliffe, Burney, Godwin, Mary Shelley, Edgeworth, Austen and Scott.

ENGL 348 ***English Fiction from Dickens to Hardy*** (6 credits)
This course stresses the development and diversity of the Victorian novel through a study of works by such writers as Dickens, Gaskell, the Brontës, Thackeray, Eliot, Trollope, Meredith and Hardy. Some attention may be given to the growth of experimental, non-realistic and popular forms of fiction such as the fantasy, the mystery and the adventure.

ENGL 352 ***Late Victorian Literature*** (3 credits)
In nineteenth-century art we find both witty sophistication and anxiety at the collapse of traditional values. Writers such as Butler, Hopkins, Pater, early James, Wilde, and Gissing are considered as they respond in various ways to their age and a sense of imminent crisis.
NOTE: Students who have received credit for ENGL 350 may not take this course for credit.

ENGL 353 ***English Literature from the Edwardian Era to World War I*** (3 credits)
A study of the traditionalism and experimentation characteristic of the literature of this period. Writers such as the later James, Conrad, Madox Ford, Forster, Shaw, Wells, Rebecca West, the early Lawrence, early Woolf, Housman, and Wilfred Owen are considered.
NOTE: Students who have received credit for ENGL 350 may not take this course for credit.

ENGL 355 ***Yeats and Joyce*** (3 credits)
This course focuses on Yeats and Joyce in the context of their Anglo-Irish contemporaries.
NOTE: Students who have received credit for ENGL 354 may not take this course for credit.

ENGL 356 ***Twentieth-Century British Literature*** (6 credits)
A study of twentieth-century British authors such as Joyce, Yeats, Woolf, Shaw, E.M. Forster, Waugh, T.S. Eliot, Auden, and Lessing.
NOTE: This course may not be taken for credit with ENGL 357 or 358.
NOTE: Students who have received credit for ENGL 286 may not take this for credit.

ENGL 357 ***Modern British Literature*** (3 credits)
A study of modern British authors, such as Hardy, Hopkins, Conrad, Lawrence, E.M. Forster, Woolf, Yeats, and T.S. Eliot.
NOTE: This course may not be taken for credit with ENGL 356.
NOTE: Students who have received credit for ENGL 287 may not take this course for credit.

ENGL 358 ***Contemporary British Literature*** (3 credits)
A study primarily of post-World War II British authors such as Auden, Thomas, Beckett, Pinter, Lessing, and Murdoch.
NOTE: This course may not be taken for credit with ENGL 356.
NOTE: Students who have received credit for ENGL 288 may not take this course for credit.

ENGL 359 ***Twentieth-Century British Drama*** (3 credits)
A study of the plays of major British dramatists from the early part of the century to the present, such as Shaw, Wesker, Osborne, Bond, Pinter, Orton, and Churchill.

ENGL 360 ***Commonwealth and Third-World Literature Written in English I*** (3 credits)
Selected novels, short stories, and the poetry from West Africa, East Africa, and the Caribbean.
NOTE: Students who have received credit for ENGL 295 may not take this course for credit.

ENGL 361 ***Commonwealth and Third-World Literature Written in English II*** (3 credits)
Selected novels, short stories, and poetry from South Africa, Zimbabwe, India, Australia, and New Zealand.
NOTE: Students who have received credit for ENGL 296 may not take this course for credit.

ENGL 365 ***Twentieth-Century American Fiction*** (3 credits)
A study of major American fiction writers from the beginning of the century to the present, such as Dreiser, Dos Passos, Cather, Hemingway, Steinbeck, Faulkner, O'Connor, Morris, and Barth.
NOTE: Students who have received credit for ENGL 363 or 364 may not take this course for credit.

ENGL 366 ***Twentieth-Century British Fiction*** (3 credits)
A study of the works of major British fiction writers from the early part of the century to the present, such as Conrad, Forster, Waugh, Woolf, Lawrence, Spark, Murdoch, and Drabble.

ENGL 367 ***American Poetry*** (3 credits)
A study of the theory and practice of the major American poets since the mid-nineteenth century. Particular emphasis is placed on poets such as Whitman, Dickinson, Frost, Cummings, Williams, Stevens, Pound, Crane, Eliot, and H.D., with some attention paid to developments in contemporary poetry as well.

ENGL 369 ***American Drama*** (3 credits)
A study of the plays of major American dramatists such as O'Neill, Williams, Miller, Albee, and Sam Shepard.

ENGL 370 ***Canadian Fiction: Beginnings through World War II*** (6 credits)
A study of the themes and technical strategies of Canadian fiction in its formative period, including romance, naturalism, documentary, autobiography, fable, and myth. Texts are drawn from authors such as Haliburton, Moodie, Duncan, Leacock, Grove, Callaghan, Ostenso, Ross and Lowry.
NOTE:Students who have credit for ENGL 376 and 377 may not take this course for credit.

ENGL 371 ***Postwar Canadian Fiction*** (3 credits)
A study of modern Canadian fiction through the 50's to the mid-60's as it incorporates the lyrical and documentary, the universal and the regional, the traditional and the experimental. Authors may include Roy, Wilson, Buckler, MacLennan, Watson and Richler.

ENGL 372 ***Contemporary Canadian Fiction*** (3 credits)
A study of continuity and development in modern Canadian fiction from the mid-60's to the present. Authors may include Laurence, Gallant, Atwood, Davies, Carrier, Hodgins, Wiebe and Munro.

ENGL 375 ***Modern Canadian Poetry and its Roots*** (6 credits)
A study of poets such as Pratt, Klein, Page, Livesay, Birney, Layton, Purdy, Webb, Atwood, and Ondaatje with their predecessors among the poets of Confederation.

ENGL 379 ***Canadian Drama*** (3 credits)
A study of several twentieth-century Canadian playwrights such as George F. Walker, George Ryga, Bryan Wade, Ken Gass, Michel Tremblay and Sharon Pollock who, taken together, represent such conflicts in Canadian art as regionalism and internationalism, realism and experimentation.

ENGL 381 ***Women's Writing Before the Twentieth Century*** (3 credits)
The course offers a historical survey of women's writing in a variety of genres: novelistic fiction, poetry, personal prose, drama, and polemical exposition. While considering individual works in terms of their formal and thematic properties, and in the context of social and literary history, the course also pursues a feminist interrogation of the issues described in ENGL 248. Writers studied may include: Anne Finch, Aphra Behn, Mary Wollstonecraft, Jane Austen, the Brontës, Susanna Moodie, Elizabeth Barrett Browning, George Eliot, Emily Dickinson, Kate Chopin.
NOTE 1: Students are strongly advised to take ENGL 248 before taking this course.
NOTE 2: Students who have received credit for ENGL 251 may not take this course for credit.

ENGL 382 ***Women's Writing in the Twentieth Century*** (6 credits)
The course surveys twentieth-century writing by women, primarily in fiction, poetry and drama. While considering these contemporary works in terms of their formal and thematic properties, and in the context of social and literary history, the course also pursues a feminist interrogation of the issues described in ENGL 248. Writers studied may include: Gertrude Stein, Virginia Woolf, H.D., Dorothy Livesay, Adrienne Rich, Sylvia Plath, Doris Lessing, Sharon Pollack, Alice Munro, Toni Morrison.
NOTE 1: Students are strongly advised to take ENGL 248 before taking this course.
NOTE 2: Students who have received credit for ENGL 252 may not take this course for credit.

ENGL 384 ***Studies in Rhetoric*** (3 credits)
An inquiry into the nature and function of rhetoric, the art of convincing others, through an examination of such influential classical rhetoricians as Aristotle, Cicero, and Quintilian, as well as the place of rhetoric in contemporary critical discourse. This course offers, through written exercises, practical experience in the development of rhetorical techniques.
NOTE: Students who have received credit for ENGL 215 may not take this course for credit.

ENGL 385 ***The Bible and English Literature*** (6 credits)
A study of the literary handling of Biblical material and the literary uses of Biblical allusion in English Literature by authors such as Milton, Bunyan, Blake, Byron, and T.S. Eliot.

ENGL 387 ***The Aesthetic and Religious Experience in Literature*** (6 credits)
An interdisciplinary course which explores the relationships between literature and religion through practical criticism, literary theory, aesthetics, and theology.

ENGL 388 ***History of Criticism and Literary Theory*** (3 credits)
A study of the major theories of criticism in their historical and literary contexts from the Classical Period to the mid-twentieth century. Texts are chosen from among such representative writers as Aristotle, Quintilian, Dante, Tasso, Sidney, Dryden, Johnson, Lessing, Coleridge, Arnold, James, Richards, Eliot, Leavis.

ENGL 389 ***Contemporary Critical Theory*** (3 credits)
Prerequisite: At least nine credits in Period courses, three of these nine credits in the Twentieth Century; ENGL 305^6, 307^3, 308^3, 355^3, 369^3, 371^3, 372^3, 379^3, 390^6, 392^6, 459^6. An examination of various contemporary critical theories: Formalist, deconstructionist, Marxist, feminist, phenomenological, psychoanalytical. Texts are chosen from the writings of such theorists as Bakhtin, Frye, Todorov, Booth, Bachelard, Barthes, Foucault, Derrida, Kristeva, Jameson.

ENGL 390 ***Modern Poetry*** (6 credits)
An examination of the characteristic elements of twentieth-century poetry, in the context of a study of such poets as Yeats, Eliot, Pound, Stevens, Rilke, Celan, Birney, Avison, and Bowering.

ENGL 392 ***Modern Drama*** (6 credits)
A study of the main currents in Western drama since Ibsen. This course includes such representative playwrights as Chekhov, Lorca, Strindberg, Pirandello, O'Neill, Brecht, Pinter, Beckett, and Weiss.
NOTE: This course may not be taken for credit with ENGL 236.

ENGL 393 ***History and Structure of the English Language*** (3 credits)
The course deals with the linguistic and historic development of the English language. The influence of language changes upon the literature is also considered.

ENGL 394 ***English Prose Style*** (3 credits)
This course is designed to introduce students to the experience and assessment of the subt leties and varieties of prose style within the English tradition. It includes selections from the works of distinguished prose stylists.

ENGL 395 ***Science Fiction*** (6 credits)
An exploration of the varieties and nature of science fiction from H.G. Wells to Ursula LeGuin. Readings include examples of English and American science fiction and translations of foreign works. Among the authors studied are Huxley, Orwell, Zamyatin, Jack London, Capek, Borges, Calvino, and Lem.

ENGL 396 ***Advanced Composition*** (6 credits)
Prerequisite: ENGL 211 previously or ENGL 212, ENGL 213. This course is designed for students already in control of the basic techniques of composition and who wish to perfect their ability to write clearly and effectively for business and professional purposes.
NOTE 1: Students who have received credit for this course may not subsequently take any ESL course or ENGL 205, 206, 209, 212 or 213.
NOTE 2: Unless ENGL 212 and ENGL 213 have been completed previously, students must take a placement test before registering for this course.

ENGL 398 ***Selected Topics in English*** (3 credits)

ENGL 399 ***Selected Topics in English*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ENGL 410 ***Non-Fiction Writing*** (6 credits)
Prerequisite: ENGL 225 or ENGL 226 or ENGL 227, or permission of the Department. A workshop for students who intend to become professional writers of the forms of non-fiction (such as journals, personal essays, biographies, autobiographies, and reviews).

ENGL 411 ***Script Writing for Radio, Screen, and Television*** (6 credits)
Prerequisite: ENGL 225 or ENGL 226 or ENGL 227, or permission of the Department. A workshop for the composition and development of creative scripts for radio, screen, and television. In any one year, the course may concentrate on one or two of these areas.

ENGL 412 ***Writing of Children's Literature*** (6 credits)
Prerequisite: ENGL 225 or ENGL 226 or ENGL 227, or permission of the Department. A workshop in the writing of prose, poetry, and drama for children. This course involves an exploration of the literary techniques appropriate to the sensibilities of children and their world.

ENGL 413 ***Editing, Publishing, and Creative Research*** (6 credits)
Prerequisite: Permission of the Department. This course deals with such areas as magazines, small presses, and anthologies, that stimulate and promote literary activity. Emphasis is also given to the research problems peculiar to the creative writer.

ENGL 414 ***Translation of Literary Texts*** (6 credits)
Prerequisite: Permission of the Department. Advanced workshop in the translation of literary texts. The emphasis is on re-creation in English of French source-texts, but other source-languages may be included, depending on the special competence of the instructor. Students are expected to be fluently bilingual and to have some experience in translating literary texts. The course is part of the Creative Writing programme and is not intended for students to upgrade their bilingualism.

ENGL 425 ***Advanced Creative Writing: Poetry*** (6 credits)
Prerequisite: ENGL 225, or approved work. A workshop in the writing of poetry. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its material and techniques, to demonstrate their further progress in the craft.

ENGL 426 ***Advanced Creative Writing: Prose*** (6 credits)
Prerequisite: ENGL 226, or approved work. A workshop in the writing of fiction. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its materials and techniques, to demonstrate their further progress in the craft.

ENGL 427 ***Advanced Creative Writing: Drama*** (6 credits)
Prerequisite: ENGL 227, or approved work. A workshop in the writing of plays. The students are expected to enter this course with competence in the fundamentals of the form, and to go on, by experimenting more fully with its materials and techniques, to demonstrate their further progress in the craft.

ENGL 430 ***Old English*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of the language and literature of the Anglo-Saxon era, chiefly of the *Beowulf* epic.

ENGL 432 ***Middle English Literature*** (6 credits)
Prerequisite: Six credits in English Literature or permission of the Department. A study of literature written in the English dialects from 1200 to 1500, including works such as *Sir Gawain and the Green Knight* and other romances, early lyrics, religious prose, drama, and selections from Layamon's *Arthurian Brut,* Langland's *Piers Plowman,* and Malory's *Morte D'Arthur.*

ENGL 440 ***The Literatures of Canada and the United States*** (6 credits)
Prerequisite: ENGL 290 or ENGL 300 or ENGL 301; ENGL 302. It is to the student's advantage to enter this course with knowledge of both literatures. Studies in common and contrasting problems in the two national literatures.

ENGL 459 ***Contemporary Literature*** (6 credits)
Prerequisite: Six credits in modern literature. A study of poetry, prose fiction, and drama, written in or translated into English since the Second World War. This course is intended for students whose exploration of modern literature has already suggested to them something of the radical experimentation in form which characterizes contemporary literature.

ENGL 470 ***Honours Seminar*** (3 credits)
Prerequisite: Enrolment in Honours English, 24 credits in English and permission of the Department. Exceptional students not enrolled in Honours English may be admitted. The topics of the seminar vary from year to year. The seminars focus upon an oral presentation by each student.
NOTE: Enrolment is limited. Students should apply to the Department one term in advance.

ENGL 471 ***Independent Studies*** (3 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial programme arranged with a member of the Department.
NOTE: This course may not be taken for credit with ENGL 473.
NOTE: Students who have received credit for ENGL 478 may not take this course for credit.

ENGL 472 ***Independent Studies*** (3 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial programme arranged with a member of the Department.
NOTE: This course may not be taken for credit with ENGL 473.
NOTE: Students who have received credit for ENGL 478 may not take this course for credit.

ENGL 473 ***Independent Studies*** (6 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial programme arranged with a member of the Department.
NOTE: This course may not be taken for credit with ENGL 471 or 472.
NOTE: Students who have received credit for ENGL 479 may not take this course for credit.

ENGL 474 ***Honours Essay*** (3 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial programme arranged with a member of the Department.
NOTE: Students who have received credit for ENGL 480 may not take this course for credit.

ENGL 477 ***Advanced Stylistics*** (3 credits)
Prerequisite: ENGL 271 or permission of the Department. This course concentrates on the strategies of style through analytical study of the components of discourse such as diction, sentence structure, and paragraph formation.

ENGL 490 ***Joint Tutorial in History and English*** (6 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial for students in an English and History Joint Honours Programme.

ENGL 491 ***Joint Tutorial in Modern Languages and English*** (6 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A tutorial for students in an English and Modern Languages Joint Honours Programme.

ENGL 496 ***Advanced Research and Thesis*** (6 credits)
Prerequisite: Enrolment in an English programme or 9 credits in English Literature. A small number of seminars or tutorials on special themes and topics, to vary each year. Registration is limited to Honours students in their final year. All students must consult in advance with the Department.

ENGL 498 ***Advanced Topics in English*** (3 credits)

ENGL 499 ***Advanced Topics in English*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.110 Études françaises

Chair
MARTHE CATRY-VERRON, *Associate Professor*

Professors
PAUL D'HOLLANDER
GASTON LAURION
GILBERT TAGGART

Professor in the Conservatory of Cinematographic Art, Sir George Williams Campus
SERGE LOSIQUE

Associate Professors
GILBERT CHARPENTIER
JEAN-MARC GOUANVIC
ALBERT JORDAN
CLAUDE LEVY
DAVID LEVY
PIERRE L'HERAULT
MARIE-FRANÇOISE LIGIER
PIERRE PARC
LEONARD SUGDEN
MAYLIS TIFFOU
NORMAND TRUCHON
MAIR VERTHUY
JUDITH WOODSWORTH

Assistant Professors
ANTOINE DI LILLO
CLAIRE LE BRUN
SHERRY SIMON
MARIE-FRANCE WAGNER

Il appartient à chaque étudiant-e de remplir toutes les conditions requises dans son programme. L'exposant 3 ou 6 indique le nombre de crédits.

72 BA Honneurs en littératures française et anglaise

6 crédits ENGL à choisir parmi les cours 256 à 284
6 crédits ENGL à choisir parmi les cours 290^6, 293^3, 298^3, 299^6, 300^6, 301^3, 303^3, 305^6, 306^6, 311^6, 356^6, 357^3, 358^3, 360^3, 361^3, 370^6, 371^3, 372^3, 375^6, 390^6, 392^6
6 crédits ENGL à choisir parmi les cours 310^6, 316^3, 320^6, 327^3, 328^3
12 crédits ENGL à choisir, en accord avec les deux départements, dans des périodes et des genres correspondants.
18 crédits FRAN à choisir parmi les cours 252^3, 253^3, 270^3, 271^3, 321^3, 322^3, 402^6
12 crédits FRAN à choisir, en accord avec les deux départements, dans des périodes et des genres correspondants.
6 crédits FRAN ou ENGL, à choisir en dehors de périodes et des genres précédemment approuvés.
6 crédits à choisir entre ENGL 473^6 et FRAN 496^6

N.B.: Les étudiant-e-s souhaitant suivre le cours FRAN 496^6 voudront bien noter que ce cours a pour préalable 12 crédits dans la spécialité.

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné de chacun des deux départements.

60 BA Honneurs en littératures de langue française

12 crédits choisis dans les groupes A, B, et C; 6 crédits au maximum dans un groupe.
Groupe A
FRAN 266^3 et 267^3 ou 402^6
Groupe B
FRAN 370^3, 371^3, 372^3, 478^3, 480^3, 481^3, 489^6
Groupe C
FRAN 252^3, 253^3, 256^3, 257^3, 270^3, 271^3, 321^3, 322^3, 451^3, 476^3, 477^3
9 crédits en littérature française du Moyen-Âge et du 16e siècle
9 crédits en littérature française des 17e et 18e siècles.
18 crédits en littératures de langue française des 19e et 20e siècles.
6 crédits FRAN 496^6
6 crédits au choix en littératures de langue française.

N.B.: Les étudiant-e-s souhaitant suivre le cours FRAN 496^6 voudront bien noter que ce cours a pour préalable 12 crédits dans la spécialité.

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

60 BA Spécialisation en littératures de langue française

12 crédits choisis dans les groupes A, B, et C; 6 crédits au maximum dans un groupe.
Groupe A
FRAN 266^3 et 267^3 ou 402^6
Groupe B
FRAN 370^3, 371^3, 372^3, 478^3, 480^3, 481^3, 489^6
Groupe C
FRAN 252^3, 253^3, 256^3, 257^3, 270^3, 271^3, 321^3, 322^3, 451^3, 476^3, 477^3
9 crédits en littérature française du Moyen-Âge et du 16e siècle
9 crédits en littérature française des 17e et 18e siècles.
18 crédits en littératures de langue française des 19e et 20e siècles.
6 crédits FRAN 496^6
6 crédits en dehors du département d'études françaises choisis en consultation avec le

département dans des domaines connexes.

N.B.: Les étudiant-e-s souhaitant suivre le cours FRAN 496[6] voudront bien noter que ce cours a pour préalable 12 crédits dans la spécialité.

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

45 BA Majeure en études françaises

Option: Langue

1re étape

15 Un maximum de 15 crédits chosis parmi FRAN 254[3], 255[3], 302[3], 303[3], 305[3], 306[3], 308[6], 310[3], 311[3], 312[3], 313[3], 316[3], 317[3], 318[3], 319[3]. 6 crédits au maximum en "langue de spécialité" (310 à 319).

2e étape

6 crédits FRAN à choisir parmi les cours 400[3], 401[3], 402[6], 403[3], 406[3], 407[3]

6 crédits FRAN à choisir parmi les cours 252[3] et 253[3], ou 321[3] et 322[3]

3e étape

18 crédits FRAN à choisir parmi les cours 264[3], 265[3], 266[3], 267[3], 269[3], 270[3], 271[3], 366[3], 367[3], 400[3], 401[3], 402[6], 403[3], 404[3], 405[3], 406[3], 407[3], 409[3], 410[3], 412[3], 413[3], 414[3], 415[3], 418[3], 419[3], 466[3], 467[3], 468[3], 469[3], 489[6]

N.B.: Les étudiant-e-s commençant le programme à la deuxième étape doivent obtenir 33 crédits à la troisième étape.

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

45 BA Majeure en études françaises

Option: littérature

6 crédits FRAN à choisir parmi les cours 400[3], 401[3], 402[6], 403[3], 406[3], 407[3]

6 crédits FRAN à choisir parmi les cours 252[3] et 253[3], ou 321[3] et 322[3]

27 crédits en littératures de langue française

6 crédits en littérature française pour les étudiant-e-s qui auront suivi FRAN 252[3] et 253[3] OU 6 crédits en littérature québécoise pour les étudiant-e-s qui auront suivi FRAN 321[3] et 322[3].

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

48 BA Majeure en études françaises

Option: traduction

1re étape

6 crédits ENGL 212[3] et 213[3]

6 crédits FRAN à choisir parmi les cours 302[3], 303[3], 306[3], 400[3], 401[3]

2e étape

6 crédits FRAN à choisir parmi les cours 252[3] et 253[3], ou 321[3] et 322[3]

6 crédits FRAN à choisir parmi les cours 400[3], 401[3], 402[6], 403[3], 406[3], 407[3]

6 crédits TRAD 200[3], et 201[3] ou 202[3]

3e étape

9 crédits TRAD à choisir parmi les cours 301[3] ou 302[3], 303[3] ou 304[3], 310[3], 311[3], 403[3] ou 404[3], 405[3] ou 406[3], 408[3]

3 crédits TRAD à choisir parmi les cours 412[3] et 414[3]

6 crédits en littérature d'expression anglaise

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

45 BA Majeure en études françaises

Option: enseignement du français

1re étape

6 crédits FRAN à choisir parmi les cours 252[3] et 253[3], ou 321[3] et 322[3]

6 crédits FRAN à choisir parmi les cours 400[3], 401[3], 402[6], 403[3], 406[3], 407[3]

2e et 3e étapes

6 crédits FRAN à choisir parmi les cours 264[3], 265[3], 266[3], 267[3]

6 crédits FRAN à choisir parmi les cours 467[3], 468[3], 469[3]

3 crédits FRAN 381[3]

6 crédits FRAN 382[3], 385[3]

6 crédits TESL 341[3], 415[3]

3 crédits ADED choisis en accord avec le département d'études françaises.

3 crédits FRAN 488[3]

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

42 BA Majeure en études françaises

Option: études francophones

6 crédits FRAN à choisir parmi les cours 252[3] et 253[3], ou 321[3] et 322[3]

6 crédits FRAN à choisir parmi les cours 400[3], 401[3], 402[6], 403[3], 406[3], 407[3]

6 crédits FRAN 364[3], 365[3]

18 crédits FRAN à choisir parmi les cours 256[3], 257[3], 360[3], 361[3], 462[3], 463[3], et les cours de littérature québécoise (3 crédits au maximum) et de littérature française (3 crédits au maximum)

6 crédits FRAN à choisir parmi les cours 493[6], 494[3], 495[3], 496[6]

63 BA Spécialisation en traduction

N.B.:

1. Le BA Spécialisation en traduction est un programme contingenté. Comme il demande une excellente connaissance du français et de l'anglais, les étudiant-e-s admis-e-s devront subir des tests de placement dans les deux langues. Les cours TRAD sont réservés en priorité aux étudiant-e-s inscrit-e-s dans les programmes de traduction.

2. Le programme comporte deux options: la traduction du français vers l'anglais ou de l'anglais vers le français. Normalement, les étudiant-e-s choisiront l'une ou l'autre de ces deux options. Dans de rares cas, certain-e-s candidat-e-s pourront satisfaire aux exigences des deux options.

3. Les étudiant-e-s du programme de BA Spécialisation en traduction doivent obtenir une note minimale de C dans tous les cours de traduction. Si la note obtenue est inférieure à C, les étudiant-e-s devront reprendre le cours dans l'année qui suit. Une seule reprise est permise. Si cette exigence n'est pas satisfaite, ou en cas d'échec, les étudiant-e-s seront radié-e-s du programme. En cas de probation ou de radiation, les étudiant-e-s recevront un avis écrit de la direction du département.

Option A: français-anglais

1re étape

6 crédits FRAN à choisir parmi les cours 366[3] et 367[3], 400[3] et 401[3], 402[6] ou 406[3] et 407[3]

NOTE: Un-e étudiant-e qui, à l'examen d'admission, n'a pas obtenu une note lui permettant de suivre les cours de niveau 400 peut s'inscrire aux cours 302[3] et 303[3] ou 306[3] et suivre les cours ci-dessus en 2e année au plus tard.

6 crédits ENGL 212[3] et 213[3]
12 crédits en littératures de langue française
6 crédits TRAD 200[3] et 201[3]

2e étape

6 crédits TRAD 301[3] et 303[3]
6 crédits TRAD 310[3] et 311[3]
6 crédits de linguistique choisis en consultation avec le conseiller pédagogique
3 crédits ENGL à choisir entre les cours 477[3] et 396[6]

3e étape

3 crédits TRAD à choisir parmi les cours 403[3], 405[3], et 408[3]
3 crédits TRAD à choisir entre les cours 412[3] et 414[3]
3 crédits à choisir entre TRAD 401[3] et ENGL au choix
3 crédits TRAD 409[3]

Option F: anglais-français

1re étape

6 crédits FRAN à choisir parmi les cours 366[3] et 367[3], 400[3] et 401[3], 402[6], ou 406[3] et 407[3]
6 crédits ENGL 212[3] et 213[3]

NOTE: Un-e étudiant-e qui n'est pas admissible au cours ENGL 212[3] peut s'inscrire aux cours ESL 209[3] et 210[3] ou ENGL 205[3] et 206[3] et suivre les cours ENGL 212[3] et 213[3] en 2e année au plus tard

12 crédits en littératures de langue française
6 crédits TRAD 200[3] et 202[3]

2e étape

6 crédits TRAD 302[3] et 304[3]
6 crédits TRAD 310[3] et 311[3]
6 crédits en linguistique en consultation avec le conseiller pédagogique
3 crédits FRAN 403[3]

3e étape

3 crédits TRAD à choisir parmi les cours 404[3], 406[3], 408[3]
3 crédits TRAD 410[3]
3 crédits TRAD à choisir entre les cours 412[3] et 414[3]
3 crédits à choisir entre les cours TRAD 402[3] et FRAN 415[3]

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

24 Mineure en langue française

24 crédits de langue, choisis dans un ordre accepté par le département, parmi les cours suivants:

— Un maximum de 18 crédits FRAN à choisir parmi les cours 204[3], 205[3], 206[3], 207[3], 208[6], 270[3], 271[3], 302[3], 303[3], 305[3], 306[3], 308[6], 310[3], 311[3], 312[3], 313[3], 316[3], 317[3], 318[3], 319[3]; 6 crédits au maximum en "langue de spécialité" (310 à 319).

— Un minimum de 6 crédits FRAN à choisir parmi les cours 264[3], 265[3], 266[3], 267[3], 366[3], 367[3], 400[3], 401[3], 404[3], 405[3], 406[3], 407[3], 409[3], 410[3], 412[3], 413[3], 414[3], 415[3], 418[3], 419[3], 466[3], 467[3], 489[6].

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

24 Mineure en litttératures de langue française

24 crédits en littératures de langue française choisis en consultation avec le département.

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

30 Certificat en langue française

30 crédits FRAN, choisis dans un ordre accepté par le département, à un niveau supérieur à 201.

Un minimum de 6 crédits FRAN à choisir parmi les cours 264[3], 265[3], 266[3], 267[3], 366[3], 367[3], 400[3], 401[3], 404[3], 405[3], 406[3], 407[3], 409[3], 410[3], 412[3], 413[3], 414[3], 415[3], 418[3], 419[3], 466[3], 467[3].

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département.

30 Certificat d'enseignement du français langue seconde aux adultes

Conditions d'admission

Le certificat est destiné à celles et à ceux qui enseignent ou désirent enseigner le français langue seconde à diverses clientèles adultes et qui souhaitent améliorer leurs compétences méthodologiques et professionnelles.

Les candidat-e-s doivent posséder:

— le DEC ou l'équivalent et une certaine expérience de l'enseignement, ou l'autorisation de la direction d'un programme;

— le cours FRAN 400 ou l'équivalent.

Les candidat-e-s doivent faire preuve d'une très bonne connaissance du français oral et pouvoir suivre certains cours de TESL et ADED donnés en anglais.

6 crédits FRAN à choisir parmi les cours 264[3], 265[3], 266[3], 267[3]
3 crédits FRAN à choisir parmi les cours FRAN 467[3], 468[3], 469[3]
3 FRAN 381[3]
6 FRAN 382[3], 385[3]
6 TESL 341[3], 415[3]
3 crédits ADED à choisir en consultation avec le département d'études françaises.
3 FRAN 488[3]

N.B.: Avant de s'inscrire, les étudiant-e-s devront faire approuver par écrit leur programme par un membre désigné du département. Celles et ceux qui s'inscrivent à la fois au Certificat d'enseignement du français langue seconde et au Certificate in the Teaching of English as a Second Language doivent remplacer le TESL 341[3] et le TESL 415[3] par d'autres cours approuvés par le département d'études françaises.

Il est à noter que ce certificat d'enseignement aux adultes ne mène pas à un permis d'enseigner dans les écoles primaires et secondaires.

Les étudiant-e-s de l'université Concordia peuvent transférer dans le programme de certificat tout crédit applicable obtenu dans un autre programme inachevé ou à titre d'étudiant-e indépendant-e ou spécial-e, à condition que le résultat soient satisfaisant. Les étudiant-e-s

provenant d'autres institutions peuvent y transférer jusqu'à *12* crédits obtenus dans un programme inachevé ou à titre d'étudiant-e indépendant-e ou spécial-e, à condition que leurs résultats soient satisfaisants. Le transfert éventuel de ces crédits sera déterminé au moment de l'inscription au programme.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.
Les cours du département ayant reçu de nouveaux numéros, les étudiant-e-s trouveront une liste d'équivalences à la section 200.1.

FRAN 200 ***French Language: Elementary I*** (3 credits)
This course is intended for students having no previous training in French. It includes a comprehensive introduction to the basic structures and vocabulary of French and should enable students to acquire an ability to speak and understand simple conversational French. Both oral and written aspects of the language are presented, with special emphasis on oral skills. Laboratory sessions are included.

FRAN 201 ***French Language: Elementary II*** (3 credits)
Prerequisite: FRAN 200 or equivalent. Continuation of the previous course.

FRAN 202 ***Langue française: niveau de transition I*** (3 crédits)
Préalable: FRAN 201 ou l'équivalent. Ce cours s'adresse aux étudiant-e-s ayant suivi soit un an de français à l'université ou au niveau collégial, soit deux ans de français à l'école secondaire, ou l'équivalent. Ce cours permet aux étudiant-e-s d'accéder à un niveau de compréhension et d'expression suffisant pour communiquer en français oralement et par écrit avec une certaine assurance. Par l'utilisation de techniques de conversation dirigée, de travail systématique en classe et au laboratoire et d'exercices écrits, les étudiant-e-s acquerront un répertoire de structures et un vocabulaire plus étendu. Séances de laboratoire.

FRAN 203 ***Langue française: niveau de transition II*** (3 crédits)
Préalable: FRAN 202 ou l'équivalent. Suite du cours précédent.

FRAN 204 ***Langue française: niveau intermédiaire I*** (3 crédits)
Préalable: FRAN 203 ou l'équivalent. Ce cours s'adresse aux étudiant-e-s ayant suivi soit 4 ans de français à l'école secondaire, soit 2 ans de français à l'université ou au niveau collégial ou l'équivalent. Par une étude et une pratique intensive des tournures du français courant, l'étudiant-e pourra acquérir l'aisance nécessaire à une communication orale et écrite spontanée. Le cours fournira également quelques aperçus sur le mode de vie des francophones.

FRAN 205 ***Langue française: niveau intermédiaire II*** (3 crédits)
Préalable: FRAN 204 ou l'équivalent. Suite du cours précédent.

FRAN 206 ***Cours de grammaire niveau intermédiaire I*** (3 crédits)
Préalable: FRAN 203 ou l'équivalent. Ce cours s'adresse en particulier aux étudiant-e-s parlant français avec une certaine aisance et qui voudraient améliorer leur expression écrite par une étude des règles fondamentales de la grammaire et par de nombreux travaux pratiques.

FRAN 207 ***Cours de grammaire niveau intermédiaire II*** (3 crédits)
Préalable: FRAN 206 ou l'équivalent. Suite du cours précédent.

FRAN 208 ***L'art de vivre au Québec I*** (6 crédits)
Préalable: FRAN 203 ou l'équivalent. Cours intensif qui a pour but principal de permettre à l'étudiant-e de niveau intermédiaire de s'intégrer au milieu québécois, au moyen de discussions et d'activités dirigées par un-e professeur-e et animées par des moniteurs-trices-étudiant-e-s francophones. Pratique systématique du français en classe. Participation en petits groupes à des activités culturelles dépassant le cadre scolaire.
NOTE: Les étudiant-e-s qui ont suivi FRAN 300 ne peuvent obtenir de crédits pour ce cours.

FRAN 220 ***Littérature moderne*** (6 crédits)
Préalable: FRAN 205 ou l'équivalent. Au moyen d'un choix de nouvelles, romans, pièces de théâtre, et poèmes de la francophonie, l'étudiant-e apprendra à «lire», et à apprécier les caractéristiques des différents genres.

FRAN 250 ***Littérature québécoise en traduction*** (3 crédits)
Étude de la littérature québécoise en traduction, surtout du point de vue de l'écriture (vocabulaire, style, images, etc.). Étude de textes sur le plan thématique, linguistique, stylistique, et structural. Analyse des meilleures traductions disponibles. Travaux pratiques en traduction, compositions, recherches.
Textes: Bessette *Le libraire;* Blais, *La Belle Bête;* Thériault, *Agaguk;* Hébert, *Kamouraska,* etc.
NOTE: Ce cours n'est pas crédité dans les programmes de mineure, de majeure, de BA spécialisé, et d'honneurs en littérature québécoise.

FRAN 252 ***Culture et civilisation québécoises I*** (3 crédits)
Panorama de la littérature québécoise, de la Nouvelle-France à la fin du XIXe siècle, vu dans une perspective socio-historique. Par l'étude de textes significatifs, on retracera le processus historique de différenciation et d'affirmation collective des Québécois-e-s.
NOTE: Les étudiant-e-s qui ont suivi FRAN 251 ne peuvent obtenir de crédits pour ce cours.

FRAN 253 ***Culture et civilisation québécoises II*** (3 crédits)
Panorama de la littérature québécoise du XXe siècle vu dans une perspective socio-historique. Étude des grandes étapes de la production littéraire avec, comme toile de fond, un aperçu général de l'histoire politique, économique, sociale et culturelle du Québec. Étude des principaux courants de pensée.
NOTE: Les étudiant-e-s qui ont suivi FRAN 251 ne peuvent obtenir de crédits pour ce cours.

FRAN 254 ***Langue et condition des femmes au Québec I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Ce cours vise deux objectifs: examiner les différents aspects de la condition des femmes au Québec (évolution, débat actuel, etc.) et permettre à l'étudiant-e de se donner la compétence langagière en vue d'une participation au débat sur la condition féminine. Le cours sera structuré autour de certains thèmes ou dossiers tels que: le rôle des organismes politiques, gouvernementaux et syndicaux dans le débat; les questions d'actualité sociale concernant la femme: la publicité sexiste, la femme et la politique, la femme au foyer et la femme au travail, la femme et les arts, la santé des femmes, la pornographie, le viol, la violence, etc.
NOTE: Les étudiant-e-s francophones ne peuvent s'inscrire à ce cours.
Les étudiant-e-s qui ont suivi FRAN 312 ne peuvent obtenir de crédits pour ce cours.

FRAN 255 ***Langue et condition des femmes au Québec II*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Ce cours vise des objectifs semblables à ceux du cours FRAN 254 et obéit aux mêmes principes. Le choix des thèmes sera toutefois différent.
NOTE: Les étudiant-e-s francophones ne peuvent s'inscrire à ce cours.
Les étudiant-e-s qui ont suivi FRAN 313 ne peuvent obtenir de crédits pour ce cours.

FRAN 256 ***Littératures de la francophonie I: le Maghreb*** (3 crédits)
Cours d'introduction à la littérature d'expression française de l'Algérie, du Maroc et de la Tunisie. Le but de ce cours est de familiariser l'étudiant-e avec le corpus littéraire qui apparaît en Afrique du Nord sous l'influence de la France, mais véhicule une culture de type essentiellement arabo-berbère. Textes choisis dans les œuvres de Mouloud Feraoun, Mohammed Dib, Mouloud Mammeri, Kateb Yacine, Rachid Boudjedra, Assia Djebar, Aïcha Lemsine, Driss Chraïbi, Tahar Ben Jelloun, Albert Memmi, Mustapha Tlili, etc.

FRAN 257 ***Littératures de la francophonie II: l'Afrique noire*** (3 crédits)
Cours d'introduction à la littérature négro-africaine. Étude des principaux-ales écrivain-e-s noir-e-s depuis le mouvement de la «négritude» jusqu'à nos jours. D'abord anticolonialiste, puis, après les indépendances, franchement contestataire, cette littérature sera étudiée en fonction de l'histoire récente de l'Afrique et surtout de la grande mutation des années soixante. Textes choisis parmi les œuvres de Léopold Sédar Senghor, Aimé Césaire, Yambo Ouologuem, Mongo Béti, Sembe Ousmane, Camara Laye, Tchicaya U Tam'Si, Ferdinand Oyono, Sony Labou Tansi, etc.

FRAN 264 ***Phonétique I*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Étude systématique des habitudes articulatoires du français en comparaison avec celles de l'anglais. Introduction aux principes de l'analyse phonologique: groupes consonantiques possibles ou impossibles dans les deux langues. Étude de l'aspect physiologique de la parole; propriétés des voyelles et des consonnes en français. Étude des phénomènes prosodiques; intonation, rythme, accent. Aperçu de la phonétique acoustique et expérimentale.

FRAN 265 ***Phonétique II*** (3 crédits)
Préalable: FRAN 264. Séminaire de recherche expérimentale. Initiation à l'utilisation des instruments de recherche. Étude détaillée de segments linguistiques du point de vue du timbre des voyelles, de l'articulation des consonnes, et des faits prosodiques (accent, rythme, intonation). Étude expérimentale de problèmes relevant de la comparaison des systèmes phonétiques du français et de l'anglais.

FRAN 266 ***Introduction à la linguistique française I*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Introduction à l'analyse descriptive de la structure linguistique du français contemporain. Aperçus des aspects phonémiques, morpho-syntaxiques et lexicaux de la langue considérée comme un système. Applications théoriques et pratiques.
NOTE: Les étudiant-e-s qui ont suivi FRAN 262 ne peuvent obtenir de crédits pour ce cours.

FRAN 267 ***Introduction à la linguistique française II*** (3 crédits)
Préalable: FRAN 266 ou l'équivalent. Suite du cours FRAN 266.
NOTE: Les étudiant-e-s qui ont suivi FRAN 262 ne peuvent obtenir de crédits pour ce cours.

FRAN 269 ***Histoire de la langue française*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Le but de ce cours est de familiariser l'étudiant-e avec les grands moments de la langue (Concile de Tours, Édit de Villers Cotterêts, etc.) afin de lui donner une vue panoramique et diachronique de l'évolution du français.
NOTE: Les étudiant-e-s qui ont suivi FRAN 384 ne peuvent obtenir de crédits pour ce cours.

FRAN 270 ***Introduction à l'histoire de la culture et de la civilisation françaises I*** (3 crédits)
Abondamment illustré de projections, ce cours a pour but essentiel d'amener les étudiant-e-s à replacer la littérature dans son contexte historique, social, politique, et artistique.

FRAN 271 ***Introduction à l'histoire de la culture et de la civilisation françaises II*** (3 crédits)
Suite chronologique du cours FRAN 270.

FRAN 298 ***Étude d'un sujet particulier*** (3 crédits)

FRAN 299 ***Étude d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

FRAN 302 ***Langue française: niveau d'approfondissement I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Le cours d'approfondissement est destiné aux étudiant-e-s qui possèdent déjà une bonne connaissance du français et qui ont besoin d'améliorer leur expression écrite et orale. Pratique de la lecture, de la rédaction et de la grammaire.

FRAN 303 ***Langue française: niveau d'approfondissement II*** (3 crédits)
Préalable: FRAN 302 ou l'équivalent. Suite du cours FRAN 302.

FRAN 305 ***Communication orale*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Étude des caractéristiques propres à la langue orale et au déroulement du discours. Initiation à l'identification des niveaux de langue et aux aspects affectifs et situationnels de la langue parlée. Présentations théoriques et applications pratiques sous forme d'exercices d'expression et de compréhension reliés à l'analyse de documents authentiques.

FRAN 306 ***Communication écrite*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Pratique des diverses formes de l'expression écrite par la rédaction de nombreuses compositions choisies pour améliorer progressivement l'aisance de l'étudiant-e, dans la narration particulièrement.

FRAN 308 ***L'art de vivre au Québec II*** (6 crédits)
Préalable: FRAN 205 ou l'équivalent. Suite du cours FRAN 208. Ce cours intensif a pour but d'amener l'étudiant-e à approfondir la matière du cours précédent. Les objectifs visés et les moyens pédagogiques mis en œuvre sont donc semblables à ceux du cours FRAN 208. Le cours s'adresse aux étudiant-e-s de niveau d'approfondissement.

FRAN 310 ***Le français de la récréologie, de l'éducation physique et des sports I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Cours destiné aux étudiant-e-s qui travaillent déjà ou qui se préparent à œuvrer dans le domaine de la récréologie et des sports. Les thèmes étudiés comprennent le conditionnement physique, le rôle du sport dans la société, le reportage sportif, l'organisation des loisirs dans la ville et dans la nature, etc. L'acquisition du vocabulaire, des structures, et des niveaux de langue choisis en fonction de ces thèmes se fera en situations de travail simulées, par la pratique et la discussion à partir de documents authentiques et par une recherche individuelle.

FRAN 311 ***Le français de la récréologie, de l'éducation physique et des sports II*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Suite du cours FRAN 310.

FRAN 312 ***Le français des sciences sociales I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Ce cours s'adresse aux étudiant-e-s qui désirent participer activement en français à la vie politique et aux activités communautaires du Québec d'aujourd'hui. Les thèmes étudiés incluent les organismes politiques, gouvernementaux, et syndicaux, et leurs rôles respectifs, ainsi que les questions d'actualité sociale concernant la femme, la famille, etc. Par des lectures et recherches individuelles, discussions, débats, et simulation de situations authentiques, les étudiant-e-s pourront acquérir la compétence langagière nécessaire pour jouer un rôle actif dans la société qui les entoure.
NOTE: Les étudiant-e-s qui ont suivi FRAN 254 ne peuvent obtenir de crédits pour ce cours.

FRAN 313 ***Le français des sciences sociales II*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Suite du cours FRAN 312.
NOTE: Les étudiant-e-s qui ont suivi FRAN 255 ne peuvent obtenir de crédits pour ce cours.

FRAN 316 ***Le français de la bibliothéconomie I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Le cours est destiné aux étudiant-e-s qui travaillent ou se préparent à travailler dans les divers services des bibliothèques et des centres de ressources tels que le service du prêt, des acquisitions, du catalogue, etc. On étudie le vocabulaire et les structures nécessaires pour communiquer en français avec les usagers et pour échanger des renseignements en code oral ou écrit avec d'autres bibliothécaires, maisons d'édition, etc. On simulera des situations de travail, et chaque étudiant-e devra faire une recherche personnelle se rapportant à ses intérêts individuels.

FRAN 317 ***Le français de la bibliothéconomie II*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Suite du cours FRAN 316.

FRAN 318 ***Le français commercial I*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Le cours vise à faciliter la communication efficace orale et écrite dans le domaine des affaires. Il comprend une révision des structures, mais l'effort principal porte sur l'acquisition des termes et tournures de la langue du commerce, de la banque, et des affaires. On s'efforce d'enseigner ces termes en simulation de situations réelles, par ex.: au téléphone, entrevues, réunions, rédaction administrative et commerciale. On encourage les étudiant-e-s à entreprendre un projet individuel pour approfondir le vocabulaire de leur domaine particulier.

FRAN 319 ***Le français commercial II*** (3 crédits)
Préalable: FRAN 205 ou l'équivalent. Suite du cours FRAN 318.

FRAN 321 ***Panorama de la littérature française I*** (3 crédits)
Ce cours, qui traite de la littérature française des origines à la fin du règne de Louis XIV, s'adresse aux étudiant-e-s qui ont choisi la littérature comme domaine de spécialisation principale ou secondaire.
NOTE: Les étudiant-e-s qui ont suivi FRAN 320 ne peuvent obtenir de crédits pour ce cours.

FRAN 322 ***Panorama de la littérature française II*** (3 crédits)
Ce cours complète le cours FRAN 321 par une étude de la littérature française, de la Régence à nos jours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 320 ne peuvent obtenir de crédits pour ce cours.

FRAN 350 ***Les origines de la littérature québécoise*** (3 crédits)
D'une littérature coloniale à une littérature autochtone. De la tradition orale à l'écriture. Étude de textes écrits avant l'École patriotique de Québec.

FRAN 352 ***Le roman québécois du XXe siècle I*** (3 crédits)
Le roman québécois traditionnel: le roman de la fidélité, le roman d'observation, le roman de la solitude, le roman de la critique et de la satire. Étude de textes significatifs des romanciers et des romancières les plus marquants tels que: Hémon, Desrosiers, Grignon, Harvey, Savard, Ringuet, Guèvremont, Roy, Thériault, Langevin, Charbonneau, etc.

FRAN 353 ***Le roman québécois du XXe siècle II*** (3 crédits)
Le roman de revendication sociale et le nouveau roman. Étude de textes significatifs des romanciers et des romancières les plus marquants tels que: Girouard, Renaud, Major, Blais, Ferron, Godbout, Jasmin, Bessette, Aquin, Ducharme, Beaulieu, Hébert, Larocque, Bersianik, etc.

FRAN 354 ***La poésie québécoise du XXe siècle I*** (3 crédits)
De l'École littéraire de Montréal à l'automatisme. Étude de textes significatifs des poètes les plus marquants: Nelligan, Loranger, Beauchemin, Desrochers, Coderre, Hébert, Saint-Denys Garneau, Grandbois, Lasnier, etc.

FRAN 355 ***La poésie québécoise du XXe siècle II*** (3 crédits)
De l'automatisme à aujourd'hui: mouvements et formes poétiques. Étude de textes significatifs des poètes les plus marquants: Gauvreau, Hénault, Giguère, P.-M. Lapointe, Miron, Chamberland, R. Duguay, Garneau, Vanier, Francoeur, etc.

FRAN 356 ***Le théâtre québécois I*** (3 crédits)
L'évolution du théâtre jusqu'à Marcel Dubé. Aperçu historique, thématique, et formel. Le théâtre historique, patriotique, comique, le mélodrame, le drame bourgeois. Formation des troupes québécoises. Étude de textes, avec une attention particulière portée au théâtre de Gélinas, Dubé, Hébert, Savard, etc.

FRAN 357 ***Le théâtre québécois II*** (3 crédits)
Le nouveau théâtre québécois: théâtre social et politique, théâtre expérimental, théâtre d'improvisation, recherches de nouvelles formes théâtrales. Études de textes: Tremblay, Germain, Sauvageau, Loranger, Barbeau, Garneau, le Grand-cirque ordinaire, etc. En plus d'avoir recours aux textes publiés, ce cours s'appuiera d'une façon particulière sur la production courante du théâtre à Montréal.

FRAN 358 ***L'essai et le développement de la pensée québécoise*** (3 crédits)
Étude des grands thèmes et de l'évolution des formes de la pensée québécoise à travers l'essai. Textes de: Buies, Nevers, LeMoyne, Vadeboncoeur, Dumont, Vallières, Rioux, Bouthillette, etc.

FRAN 360 ***Littératures de la francophonie au féminin I*** (3 crédits)
Cours d'introduction à l'écriture des femmes de pays entièrement ou partiellement de langue française de l'Afrique noire et des Amériques, à l'exception du Canada. L'étude de leurs textes doit permettre de comprendre l'apport spécifique de ces femmes à la littérature de leur pays, les rapports qu'elles entretiennent avec le français (langue maternelle, langue d'usage, langue imposée, etc.), le regard particulier qu'elles posent sur la société.

FRAN 361 ***Littératures de la francophonie au féminin II*** (3 crédits)
Cours d'introduction à l'écriture des femmes de pays entièrement ou partiellement de langue française du monde arabe, de l'Asie et de l'Océanie. L'étude de leurs textes doit permettre de comprendre l'apport

spécifique de ces femmes à la littérature de leur pays, les rapports qu'elles entretiennent avec le français (langue maternelle, langue d'usage, langue imposée, etc.), le regard particulier qu'elles posent sur la société.

FRAN 364 ***Le quotidien de la francophonie I*** (3 crédits)
Cours d'introduction à la culture de pays entièrement ou partiellement d'expression française de l'Afrique noire et des Amériques, à l'exception du Canada. Ce cours a pour but, au moyen de documents imprimés et audio-visuels, de faire connaître la vie quotidienne de ces pays plutôt que l'histoire des faits exceptionnels.

FRAN 365 ***Le quotidien de la francophonie II*** (3 crédits)
Cours d'introduction à la culture de pays entièrement ou partiellement d'expression française du monde arabe, de l'Asie et de l'Océanie. Ce cours a pour but, au moyen de documents imprimés et audio-visuels, de faire connaître la vie quotidienne de ces pays plutôt que l'histoire des faits exceptionnels.

FRAN 366 ***Stylistique interne du français I*** (3 crédits)
Préalable: FRAN 303, ou autorisation du département. Analyse des ressources stylistiques du français: du mot au texte. Historique et théories contemporaines du style de l'analyse descriptive à la théorie des écarts. Étude des grands genres littéraires et de leur évolution.

FRAN 367 ***Stylistique interne du français II*** (3 crédits)
Préalable: FRAN 366. Suite du cours 366 et applications pratiques.

FRAN 370 ***Introduction au genre romanesque*** (3 crédits)
Le genre romanesque sera étudié dans une perspective spécifique qui pourra varier selon l'année et le ou la professeur-e: théorie du roman, catégories de roman, sociologie du roman, étude d'un type particulier de roman.

FRAN 371 ***Introduction à la poésie*** (3 crédits)
Le vers français: les formes fixes, le vers libre, le poème en prose; les notions de poétique et d'art poétique. Esthétique de la poésie, esthétique de la prose et leurs interférences; étude historique. La poésie, discours social ou asocial? Les différents aspects de la question, ou certains d'entre eux, seront étudiés, avec des exemples, dans une perspective qui pourra varier selon l'année et le ou la professeur-e.

FRAN 372 ***Introduction au théâtre en tant que genre*** (3 crédits)
Ce cours permettra aux étudiant-e-s, à partir d'un petit nombre de textes, de voir les caractéristiques du théâtre en tant que genre, d'analyser sa fonction littéraire et sociale, d'étudier sa place particulière dans les différents mouvements littéraires en France.

FRAN 373 ***Le cinéma français I*** (6 crédits)
Ce cours, abondamment illustré de films ou d'extraits de films, retrace, en tout ou en partie, l'histoire du septième art dans ses manifestations les plus originales et les plus caractéristiques.

FRAN 374 ***Le cinéma français II*** (6 crédits)
Les étudiant-e-s s'inscrivant pour la deuxième fois au cours de FRAN 373 obtiennent les crédits FRAN 374.

FRAN 381 ***Introduction à la didactique du français langue seconde*** (3 crédits)
Préalable: FRAN 400 ou l'équivalent. Aperçu historique de l'évolution des méthodes utilisées dans l'enseignement du français langue seconde avec étude des principes linguistiques, psychologiques et sociologiques sous-jacents. Étude critique et analyse des nouvelles approches méthodologiques, en particulier celles qui ont trait à l'enseignement aux adultes évoluant en milieu québécois.

FRAN 382 ***Analyse de matériel didactique*** (3 crédits)
Préalable: FRAN 400 ou l'équivalent. Étude critique du matériel utilisé pour l'enseignement du français langue seconde aux adultes dans des cadres et à des niveaux de compétence variés. Travaux pratiques d'analyse et d'exploitation de ce matériel.

FRAN 385 ***Création de matériel didactique*** (3 crédits)
Préalable: FRAN 400 ou l'équivalent. Acquisition des connaissances et des techniques nécessaires à l'élaboration de matériel didactique pour l'enseignement du français langue seconde. Travaux pratiques de planification de cours, de sélection, d'adaptation et de création de documents.

FRAN 398 ***Étude d'un sujet particulier*** (3 crédits)

FRAN 399 ***Étude d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

FRAN 400 ***Langue française: niveau de perfectionnement I*** (3 crédits)
Préalable: FRAN 303, ou l'équivalent. Cours avancé de langue, axé sur l'étude de la grammaire et de la stylistique française, permettant à un-e étudiant-e qui possède déjà une connaissance approfondie de la

langue de corriger ses lacunes, de nuancer son expression, et d'explorer les possibilités créatrices du langage.

FRAN 401 ***Langue française: niveau de perfectionnement II*** (3 crédits)
Préalable: FRAN 400, ou l'équivalent. Suite du cours FRAN 400.

FRAN 402 ***Initiation à la composition avancée*** (6 crédits)
Préalable: FRAN 303 ou l'équivalent. Révision de la grammaire. Techniques de mise en œuvre des moyens d'expression écrite et orale. Étude des différentes méthodes d'analyse et de composition, y compris la dissertation. Méthodologie de la présentation des travaux.
NOTE: Les étudiant-e-s qui ont suivi FRAN 324 ne peuvent obtenir de crédits pour ce cours.

FRAN 403 ***Rédaction avancée*** (3 crédits)
Préalable: FRAN 400 et 401 ou 402 ou 406 et 407 ou 366 et 367. Ce cours vise à faire acquérir à l'étudiant-e qui a déjà une bonne maîtrise de la grammaire l'habileté à rédiger des textes de formes diverses. À partir d'une pratique intense de l'écriture, l'étudiant-e apprendra à rédiger des textes qui répondent à un but spécifique de la communication.

FRAN 404 ***Le code oratoire I*** (3 crédits)
Préalable: FRAN 303, ou l'équivalent. Correction phonétique, en particulier au niveau de la langue «soignée», techniques de présentation de la parole en public: pose de voix, gestes, affectivité, etc. Étude du vocabulaire et des procédures nécessaires pour convoquer une réunion, la diriger, y participer. Rédaction et présentation de divers types de rapports, allocutions, et conférences. Séances de travaux pratiques en laboratoire, 1 h 30 min par semaine.

FRAN 405 ***Le code oratoire II*** (3 crédits)
Préalable: FRAN 404, ou l'équivalent. Suite du cours FRAN 404.

FRAN 406 ***Le code grammatical I*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Étude des règles fondamentales de la grammaire française à l'aide d'exercices d'analyse et de construction de phrases, ayant pour but la correction de l'orthographe et de la syntaxe.

FRAN 407 ***Le code grammatical II*** (3 crédits)
Préalable: FRAN 406, ou l'équivalent. Ce cours a pour but de fixer définitivement les connaissances grammaticales pratiques des étudiant-e-s, en particulier de ceux ou celles qui envisagent de poursuivre leurs études de français à un niveau supérieur. La norme étudiée dans ce cours tiendra compte à la fois des principes de la grammaire traditionnelle et des progrès récents dans l'étude de la langue. L'étude des unités d'expression mènera, par des exercices pratiques d'analyse fonctionnelle, à l'examen approfondi de certains points de stylistique.

FRAN 409 ***Cours libre de traduction I*** (3 crédits)
Préalable: 6 crédits parmi FRAN 304; FRAN 305; FRAN 306; FRAN 307; FRAN 400; FRAN 401; ou autorisation du département. Étude systématique des anglicismes; notions de méthodologie de la traduction; étude de quelques aspects de la stylistique comparée du français et de l'anglais; travaux pratiques de traduction de l'anglais au français.
NOTE: Ce cours est destiné particulièrement, mais non exclusivement, aux étudiant-e-s qui ne se spécialisent pas en traduction. Les étudiant-e-s qui ont suivi FRAN 408 ne peuvent s'inscrire à ce cours.

FRAN 410 ***Cours libre de traduction II*** (3 crédits)
Préalable: FRAN 409 ou autorisation du département. Suite du cours précédent.

FRAN 412 ***Le français des situations administratives et juridiques I*** (3 crédits)
Préalable: FRAN 303, ou l'équivalent. Le cours s'adresse aux étudiant-e-s qui, dans leur profession ou celle à laquelle ils ou elles se préparent, doivent utiliser le vocabulaire de l'appareil judiciaire et la terminologie des différentes branches du droit. On étudiera les situations telles que conflit locataire - propriétaire, problèmes d'assurance, contrat de mariage, etc. Par une étude théorique et pratique de divers litiges, par une recherche individuelle et en jouant les rôles de divers personnages en situation, les étudiant-e-s approfondiront leurs connaissances de la langue du droit et apprendront à l'utiliser.

FRAN 413 ***Le français des situations administratives et juridiques II*** (3 crédits)
Préalable: FRAN 412. Suite du cours FRAN 412.

FRAN 414 ***Le français de la technologie*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Ce cours s'adresse aux étudiant-e-s qui s'intéressent à la langue technique. Les étudiant-e-s se familiariseront avec la terminologie, la syntaxe et le style propres à certains domaines de la technologie. Les travaux comprendront des exercices pratiques de vocabulaire, de style et de rédaction dont le but sera de faciliter l'expression exacte de notions techniques.

FRAN 415 ***Rédaction technique*** (3 crédits)
Préalable: FRAN 414 ou l'équivalent. Dans ce cours qui s'adresse aux étudiant-e-s déjà initié-e-s à certains domaines de la technologie, on étudiera la rédaction de documents techniques tels que les résumés de textes, les spécifications, devis, appels d'offres, modes d'emploi, etc. L'effort principal portera sur la rédaction de rapports techniques.

FRAN 418 ***Le français de l'économie*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. L'étudiant-e se familiarisera avec des concepts du système économique au moyen d'une documentation axée sur des réalités économiques québécoises, canadiennes et mondiales. Étude approfondie du vocabulaire spécialisé, travaux de rédaction et présentation d'exposés à partir d'une analyse d'articles et de films didactiques sélectionnés dans le domaine.

FRAN 419 ***Le français de la finance et de la gestion*** (3 crédits)
Préalable: FRAN 303 ou l'équivalent. Ce cours vise à perfectionner l'usage du français spécialisé écrit et oral utilisé dans les relations d'affaires par un examen des difficultés de la langue française et l'étude de concepts à partir d'une documentation axée sur la science de la gestion et de la finance. Étude approfondie du vocabulaire spécialisé et rédaction de travaux dans le contexte des divers domaines de la gestion administrative, financière et celle des ressources humaines.

FRAN 420 ***Littérature du Moyen-Âge*** (6 crédits)
Initiation à la langue et à la littérature du Moyen-Âge, au moyen d'un choix d'œuvres épiques, romanesques, lyriques, historiques, pouvant varier d'une année à l'autre. En plus d'acquérir une vue générale de la littérature et une connaissance approfondie de quelques œuvres en traduction, l'étudiant-e se familiarisera suffisamment avec la langue pour ne plus être embarrassé-e à la lecture d'un texte en ancien français.

FRAN 421 ***Panorama de la littérature française du Moyen-Âge I*** (3 crédits)
Au moyen d'une sélection d'œuvres des IXe, X^{e}, XIe, et XIIe siècles, ce cours se propose de faire connaître et apprécier à l'étudiant-e les premières manifestations de la littérature française. (Serment de Strasbourg, chanson de geste, roman courtois, etc.)

FRAN 425 ***Introduction à la vie littéraire du XVIe siècle*** (3 crédits)
Les milieux. Les outils culturels. Les idéologies: problèmes, programmes, thèmes. Les événements littéraires: genèse, langue, portée.

FRAN 426 ***La poésie du XVIe siècle: des doctrines aux œuvres*** (3 crédits)
Marot, Scève, Ronsard, D'Aubigné: leurs recherches, leur évolution, leur rayonnement.

FRAN 427 ***La littérature en prose du XVIe siècle: du conte à l'essai*** (3 crédits)
Orientation et fixation des types «humanistes» dans la littérature narrative et spéculative du XVIe siècle: Marguerite de Navarre, Rabelais, Montaigne.

FRAN 428 ***La littérature de l'âge baroque*** (3 crédits)
Les dissonances de l'âge classique — du romanesque au burlesque et à la fuite poétique. Théophile de Viau, Saint-Amant, Rotrou, Cyrano de Bergerac.

FRAN 429 ***Le siècle classique*** (3 crédits)
La société classique: la Ville et la Cour, les salons, les honnêtes gens, les chefs-d'œuvre classiques.

FRAN 430 ***Le théâtre et le roman classiques*** (3 crédits)
Les dramaturges face aux règles classiques. La tragédie et la comédie classiques. Du roman précieux au roman classique.

FRAN 431 ***Les moralistes*** (3 crédits)
La pensée religieuse de Pascal à Bossuet. La morale laïque (La Fontaine). Les mondains (La Bruyère et La Rochefoucauld).

FRAN 432 ***L'aube des lumières*** (3 crédits)
La querelle des Anciens et des Modernes et la remise en question du classicisme. Intérêt pour les questions politiques, religieuses, et sociales. Vers le XVIIIe siècle.

FRAN 434 ***Littérature du XVIIIe siècle: les œuvres militantes*** (3 crédits)
Le siècle des Lumières: l'esprit philosophique (libre examen, besoin de vérité, goût des sciences); aspects de la critique religieuse, politique, sociale et économique. Les *Lettres persanes*, les *Lettres philosophiques*, l'*Encyclopédie*, le *Contrat social*, etc.

FRAN 435 ***Littérature du XVIIIe siècle: le conte et le roman*** (3 crédits)
Le conte philosophique: Voltaire; le roman picaresque: Lesage; le roman sentimental et préromantique: l'abbé Prévost et Rousseau; un premier romancier moderne: Diderot.

FRAN 436 ***Littérature du XVIIIe siècle: le théâtre et la poésie*** (3 crédits)
La tragédie: Voltaire; la comédie larmoyante: Nivelle de la Chaussée; le drame bourgeois: Diderot et Sedain; la comédie de mœurs: Lesage; la comédie psychologique: Marivaux; la comédie militante et joyeuse: Beaumarchais. La poésie: tradition et avenir.

FRAN 437 ***Littérature du XVIIIe siècle: les œuvres libertines*** (3 crédits)
Le roman libertin: Crébillon fils, Restif de la Bretonne, Laclos; l'apogée du genre: le marquis de Sade.

FRAN 438 ***Le romantisme*** (3 crédits)
Le romantisme, phénomène européen; ses causes, ses caractères particuliers en France. Le Mal du siècle, ses vagues successives et leurs causes. Les grands thèmes romantiques. Étude d'œuvres caractéristiques de Chateaubriand, Lamartine, Vigny, Hugo, Musset.

FRAN 439 ***Littérature de la période romantique*** (3 crédits)
Évolution des écrivain-e-s de la période romantique. La révolution de 1830 et «l'école du désenchantement». Étude, dans un choix de romans, de l'invention de techniques réalistes propres à exposer les problèmes éthiques, sociaux, et politiques d'une société qui s'urbanise et s'industrialise.

FRAN 440 ***Littérature sous le second-empire: une littérature ironique et critique*** (3 crédits)
On cherchera à étudier et à expliquer la rupture qui intervient dans la deuxième moitié du XIXe siècle dans la forme et dans la finalité des œuvres littéraires, particulièrement, dans ce cours, chez Baudelaire et chez Flaubert.

FRAN 441 ***La fin du siècle: entre la tour d'ivoire et le monde réel*** (3 crédits)
On cherchera à étudier et à expliquer quelles tendances littéraires nouvelles s'expriment sous des termes comme réalisme, naturalisme, ou symbolisme, dans des œuvres de Verlaine, Mallarmé, Rimbaud, Huysmans, Zola, Gide.

FRAN 442 ***Introduction au XXe siècle*** (3 crédits)
Les facteurs historiques, économiques, et socio-politiques qui caractérisent la IIIème République aux environs de 1900; les mouvements qui agitent la société française et leurs répercussions dans la vie culturelle, particulièrement littéraire, de la «Belle Époque». On étudie un certain nombre d'essais (Maurras, Bergson, Péguy ...) qui distinguent l'héritage du siècle précédent des tendances nouvelles qui marqueront la littérature du XXe siècle.

FRAN 444 ***Le roman et la poésie de 1900 à 1920*** (3 crédits)
Distinction entre la littérature en vogue et celle qui prépare le renouveau littéraire de l'entre-deux-guerres par l'étude des œuvres de certains représentants de ces deux courants choisis parmi les suivants: France, Barrès, Bourget, Gide, Valéry, Proust, Apollinaire, et Tzara.

FRAN 445 ***Le roman et la poésie de l'entre-deux-guerres*** (3 crédits)
La guerre 14-18 et ses conséquences. Littérature des «années folles»; l'internationalisme pacifiste et l'inquiétude spirituelle. Analyse de l'explosion surréaliste. Les auteur-e-s seront choisi-e-s parmi les suivant-e-s: Radiguet, Rolland, Jules Romains, Martin du Gard, Mauriac, Bernanos, Green, Giono, Colette, Breton, Eluard.

FRAN 446 ***Le roman et la poésie du XXe siècle I*** (3 crédits)
Littérature désabusée, littérature engagée. Problèmes de l'homme et de la société moderne. Le roman de la grandeur et de la condition humaines. Les écrivains de la Résistance. Les auteurs étudiés seront choisis parmi les suivants: Saint-Exupéry, Malraux, Montherlant, Céline, Giraudoux, Emmanuel, Jouve, Char.

FRAN 447 ***Le roman et la poésie du XXe siècle II*** (3 crédits)
Le domaine contemporain. Répercussion de la seconde guerre mondiale sur la vie sociale et culturelle. Littérature de l'absurde et du néant; pessimisme viril; tendances littéraires récentes: le nouveau roman, le surréalisme en question, la nouvelle poésie. Les auteur-e-s étudié-e-s seront choisi-e-s parmi les suivant-e-s: Camus, Sartre, Beauvoir, Robbe-Grillet, Queneau, Butor, Prévert, Michaux, Tournier.

FRAN 450 ***Symboles et archétypes de l'imaginaire québécois en littérature*** (3 crédits)
Identification, description, évolution des grands symboles et archétypes de l'imaginaire québécois en littérature. Examen des modes de production et de transmission. Textes puisés aussi bien dans la littérature «officielle» que dans la littérature «populaire».

FRAN 451 ***La littérature québécoise au féminin*** (3 crédits)
Étude des principales écrivaines québécoises. Saisie du réel et modes d'expression. Évolution de la conscience féminine. Les féminismes.

FRAN 453 ***Le fantastique et la tradition populaire dans la littérature québécoise*** (3 crédits)
La présence du fantastique dans la littérature québécoise et l'influence de la tradition populaire au niveau des thèmes et des structures. Textes choisis parmi l'ensemble de la production littéraire.

FRAN 454 ***Littérature et para-littérature québécoises*** (3 crédits)
Ressemblances et différences entre l'une et l'autre littérature. Conditions de production et de diffusion. Univers représenté. Structures des œuvres et idéologie. Textes choisis dans l'ensemble de la littérature québécoise. Guide: *Manuel de la petite littérature du Québec* de V.-L. Beaulieu.

FRAN 455 ***Littérature québécoise - Canadian Literature I*** (3 crédits)
Étude comparée des littératures québécoise et canadienne anglaise. Comparaison des deux littératures sur le plan thématique, stylistique, structural, idéologique, etc. Examen des similitudes, des analogies, et des traits distinctifs. L'accent dans ce cours est mis sur les œuvres traditionnelles. Textes tels que: Grove, *Settlers of the Marsh,* et Ringuet, *Trente Arpents;* MacLennan, *The Watch that Ends the Night,* et Langevin, *Poussière sur la ville,* etc.

FRAN 456 ***Littérature québécoise - Canadian Literature II*** (3 crédits)
Étude comparée des littératures québécoise et canadienne anglaise. Continuation du cours précédent. On mettra l'accent sur l'évolution des deux littératures depuis 1960. (Le nouveau roman québécois, etc.) Analyses thématique, idéologique, et stylistique. Ressemblances et dissemblances. Textes choisis dans les œuvres d'Anne Hébert, de Robertson Davies, de Marie-Claire Blais, de Margaret Atwood, etc.

FRAN 460 ***Les Voix de Montréal*** (3 crédits)
A travers des textes d'écrivains et d'écrivaines montréalais, on cherchera à rendre compte de la dimension plurielle de l'écriture et de la culture québécoises. On privilégiera les parcours transculturels des auteurs et auteures venus d'un ailleurs géographique et culturel, mais qui inscrivent leurs différences dans le texte québécois par la publication ou la traduction de leurs oeuvres en français.

FRAN 462 ***Littératures et cultures européennes d'expression françaises hors France*** (3 crédits)
Cours d'introduction, à partir de textes littéraires et autres documents imprimés ou audio-visuels, à la culture de pays européens entièrement ou partiellement de langue française, à l'exception de la France.

FRAN 463 ***Littératures et cultures canadiennes d'expression françaises hors Québec*** (3 crédits)
Cours d'introduction, à partir de textes littéraires et autres documents imprimés ou audio-visuels, à la culture des francophones canadiens à l'extérieur du Québec.

FRAN 466 ***La langue française au Québec: son évolution*** (3 crédits)
Préalable: FRAN 251 et autorisation du département. Aperçu de l'évolution du français sur le territoire québécois; influences internes et externes. Étude des rapports entre l'évolution politique et économique du Québec et celle de la langue par la consultation de documents provenant d'époques successives.

FRAN 467 ***La langue française au Québec: son état actuel*** (3 crédits)
Préalable: FRAN 262 ou l'équivalent. Analyse des aspects phonétiques, lexicaux, et morphosyntaxiques du français québécois actuel et des divergences de ce dernier par rapport à la norme européenne: archaïsmes, anglicismes, créations nouvelles. La question des niveaux de langue (aspects sociaux et linguistiques) et celle de la norme seront également abordées.

FRAN 468 ***Étude de la norme*** (3 crédits)
Préalable: FRAN 262 ou l'équivalent. Étude des facteurs politiques, sociologiques, et psychologiques contribuant à la notion de la norme. Analyse et description des écarts par rapport à la norme. Travaux pratiques d'enquête.

FRAN 469 ***Sémantique*** (3 crédits)
Préalable: FRAN 262. Étude formelle de la signification et de la segmentation du sens en français fondée sur une approche sémiotique de la langue. L'étudiant-e fera l'apprentissage de méthodes d'analyse lui permettant d'inventorier les effets de sens et de les ordonner en fonction de critères objectifs.

FRAN 472 ***Le théâtre français du XXe siècle I*** (3 crédits)
À la fin du XIXe siècle, le théâtre français connut des transformations profondes. Ce cours suivra l'évolution du théâtre à partir d'Antoine, à travers ses étapes successives, jusqu'à la fin de la période de l'entre-deux-guerres. Seront étudiés les grands metteurs en scène qui ont succédé à Antoine: Lugné-Poe, Copeau et le Cartel, ainsi que les mouvements d'idées et les dramaturges qui ont marqué cette période.

FRAN 473 ***Le théâtre français du XXe siècle II*** (3 crédits)
La guerre de 1939-1945 marque une coupure dans l'histoire du théâtre en France au XXe siècle. La relève du Cartel est assurée par des animateurs-trices tel-le-s que Jean-Louis Barrault, Jean Vilar, Roger Planchon, etc. De nouvelles lignes de force se dégagent. Seront étudié-e-s, entre autres, des représentant-e-s du théâtre politique, du théâtre de l'Absurde, et du théâtre nouveau qui se développe à la suite des événements de mai 1968.

FRAN 476 ***La littérature au féminin I*** (3 crédits)
À partir de manifestes et d'œuvres de création, on retracera différentes manifestations de la prise de conscience «féministe» chez les écrivaines françaises, ainsi que les solutions envisagées aux problèmes posés. Ce cours permettra de considérer les tendances actuelles dans une perspective historique.

FRAN 477 ***La littérature au féminin II*** (3 crédits)
Ce cours portera sur l'éclatement qui caractérise l'écriture au féminin à l'heure actuelle. On étudiera différents concepts tels que la «prise de parole», la valorisation de *l'anima,* le renversement des mythes anciens, ainsi que la révolution formelle et stylistique qui accompagne cet éclatement.

FRAN 478 ***Histoire de la critique littéraire*** (3 crédits)
Étude de l'évolution de la critique littéraire des origines au début du XXe siècle, au moyen d'un choix d'œuvres théoriques et critiques.

FRAN 480 ***Approches critiques I: la sémiotique textuelle*** (3 crédits)
Étude des conditions générales de la production du sens et de la spécificité du texte littéraire. Examen des principales théories formalistes en France et au Québec et apprentissage des méthodes critiques qui

en découlent. Travaux pratiques qui permettront à l'étudiant-e d'en contrôler l'efficacité et la valeur au contact des œuvres.

FRAN 481 ***Approches critiques II: la sociologie de la littérature*** (3 crédits)
Étude des relations qu'entretiennent entre eux le littéraire et le social. Le point de vue résolument sociologique que l'on adoptera dans ce cours permettra d'étudier l'œuvre en fonction du milieu qui en a permis l'émergence et du contexte socio-idéologique dont elle est à la fois un reflet et un élément actif.

FRAN 488 ***Stage pratique d'enseignement du français langue seconde aux adultes*** (3 crédits)
Préalable: FRAN 381 et 9 autres crédits dans le programme du Certificat d'enseignement du français langue seconde aux adultes, ou autorisation du ou de la directeur-trice du programme. Les étudiant-e-s auront l'occasion d'observer des professeur-e-s expérimenté-e-s en assistant à leurs cours et devront eux(elles)-mêmes appliquer les connaissances acquises dans les autres cours du programme à un enseignement pratique dans une classe.

FRAN 489 ***Méthodologie des travaux de recherche*** (6 crédits)
Destiné aux étudiant-e-s de dernière année et préparant aux études du deuxième cycle, ce cours permettra, par des exercices de rédaction commentés et critiqués, d'atteindre la précision, l'élégance, et l'originalité dans l'expression écrite. Analyse stylistique proprement dite (définitions et procédés de style). Théorie et pratique de l'analyse de texte—Théorie de la versification—Théorie et pratique des recherches bibliographiques.

FRAN 490 ***Tutorat en langue, linguistique ou traduction*** (6 crédits)
Préalable: 12 crédits de langue, de linguistique ou de traduction au niveau «400». Étude d'un sujet particulier dans le domaine de la langue, de la linguistique ou de la traduction.
NOTE: Tout-e étudiant-e s'inscrivant pour la seconde fois au cours FRAN 490 obtient les crédits FRAN 491 et 492.

FRAN 491 ***Tutorat en langue, linguistique ou traduction*** (3 crédits)
Préalable: 12 crédits de langue, de linguistique ou de traduction au niveau «400». Étude d'un sujet particulier dans le domaine de la langue, de la linguistique ou de la traduction.

FRAN 492 ***Tutorat en langue, linguistique ou traduction*** (3 crédits)
Préalable: 12 crédits de langue, de linguistique ou de traduction au niveau «400». Étude d'un sujet particulier dans le domaine de la langue, de la linguistique ou de la traduction.
NOTE: Tout-e étudiant-e s'inscrivant pour la seconde fois au cours FRAN 491 obtient les crédits FRAN 492.

FRAN 493 ***Tutorat en littérature*** (6 crédits)
Préalable: 12 crédits en littérature et autorisation du département. Étude d'un sujet particulier dans le domaine de la littérature.
NOTE: Tout-e étudiant-e s'inscrivant pour la seconde fois au cours FRAN 493 obtient les crédits FRAN 494 et 495.

FRAN 494 ***Tutorat en littérature*** (3 crédits)
Préalable: 12 crédits en littérature et autorisation du département. Étude d'un sujet particulier dans le domaine de la littérature.

FRAN 495 ***Tutorat en littérature*** (3 crédits)
Préalable: 12 crédits en littérature et autorisation du département. Étude d'un sujet particulier dans le domaine de la littérature.
NOTE: Tout-e étudiant-e s'inscrivant pour la seconde fois au cours FRAN 494 obtient les crédits FRAN 495.

FRAN 496 ***Recherche dirigée*** (6 crédits)
Préalable: 12 crédits dans la spécialité et autorisation du département. Ce cours n'est ouvert qu'aux étudiant-e-s des programmes de majeure, de spécialisation, ou d'honneurs. Il offre l'occasion d'approfondir l'étude d'un sujet à déterminer par l'étudiant-e en accord avec son ou sa conseiller-ère et/ou un-e professeur-e du département. Chaque étudiant-e exécute des travaux individuels sous le contrôle du ou de la professeur-e spécialiste de la matière.

FRAN 497 ***Recherche dirigée*** (6 crédits)
Tout-e étudiant-e s'inscrivant pour la seconde fois au cours FRAN 496 obtient les crédits FRAN 497.

FRAN 498 ***Étude avancée d'un sujet particulier*** (3 crédits)

FRAN 499 ***Étude avancée d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

TRAD 200 ***Méthodologie de la traduction*** (3 crédits)
Préalable: ENGL 209 et FRAN 306 ou équivalent. Ce cours a pour but d'initier l'étudiant-e aux problèmes de la traduction. Il sera une introduction générale aux différentes approches du texte à traduire: analyse

du discours, grammaire contrastive, stylistique comparée, terminologie et recherche documentaire (français/anglais).
NOTE: Les étudiant-e-s qui ont suivi FRAN 260 ne peuvent obtenir de crédits pour ce cours.

TRAD 201 ***Traduction générale du français à l'anglais*** (3 crédits)
Préalable: TRAD 200. Traduction du français à l'anglais de textes généraux et analyse des problèmes liés au transfert linguistique. (A)
NOTE: Les étudiant-e-s qui ont suivi TRAD 202 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 261 ne peuvent obtenir de crédits pour le cours TRAD 201.

TRAD 202 ***Traduction générale de l'anglais au français*** (3 crédits)
Préalable: TRAD 200. Traduction de l'anglais au français de textes généraux et analyse des problèmes liés au transfert linguistique. (F)
NOTE: Les étudiant-e-s qui ont suivi TRAD 201 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 261 ne peuvent obtenir de crédits pour ce cours.

TRAD 298 ***Étude d'un sujet particulier*** (3 crédits)

TRAD 299 ***Étude d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

TRAD 301 ***Traduction littéraire du français à l'anglais*** (3 crédits)
Préalable: TRAD 201. Sensibilisation aux problèmes spécifiques à la traduction littéraire. Travaux pratiques: traduction de textes de genres variés. (A)
NOTE: Les étudiant-e-s qui ont suivi TRAD 302 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 360 ne peuvent obtenir de crédits pour ce cours.

TRAD 302 ***Traduction littéraire du français à l'anglais*** (3 crédits)
Préalable: TRAD 202. Entraînement à la traduction littéraire dans l'autre langue de travail. (F)
NOTE: Les étudiant-e-s qui ont suivi TRAD 301 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 360 ne peuvent obtenir de crédits pour ce cours.

TRAD 303 ***Traduction littéraire de l'anglais au français*** (3 crédits)
Préalable: TRAD 201. Entraînement à la traduction littéraire dans l'autre langue de travail. (A)
NOTE: Les étudiant-e-s qui ont suivi TRAD 304 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 361 ne peuvent obtenir de crédits pour ce cours.

TRAD 304 ***Traduction littéraire de l'anglais au français*** (3 crédits)
Préalable: TRAD 202. Sensibilisation aux problèmes spécifiques à la traduction littéraire. Travaux pratiques: traduction de textes de genres variés. (F)
NOTE: Les étudiant-e-s qui ont suivi TRAD 303 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 361 ne peuvent obtenir de crédits pour ce cours.

TRAD 310 ***Initiation à la terminologie*** (3 crédits)
Préalable: TRAD 201 ou 202. Ce cours identifie certains problèmes de terminologie soulevés par la traduction et comprend des travaux pratiques tels que l'analyse lexicographique de textes français ou anglais, et la préparation de glossaires sur fiches. (F/A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 460 ne peuvent obtenir de crédits pour ce cours.

TRAD 311 ***Terminologie Pratique*** (3 crédits)
Préalable: TRAD 310. Ce cours fait suite à l'initiation à la terminologie. Rédaction de dossiers terminologiques; étude des définitions, notes et contextes; analyse sémique; études néologiques. (F/A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 461 ne peuvent obtenir de crédits pour ce cours.

TRAD 398 ***Étude d'un sujet particulier*** (3 crédits)

TRAD 399 ***Étude d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

TRAD 401 ***Traduction littéraire avancée: du français à l'anglais*** (3 crédits)
Préalable: TRAD 301 et 303. Étude des différents principes et des différentes techniques de la traduction littéraire; aperçu de la traduction littéraire au Canada. Travaux pratiques: analyse critique et comparaison de traductions et de leur original; traduction de textes français. (A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 470 ne peuvent obtenir de crédits pour ce cours.

TRAD 402 ***Traduction littéraire avancée: de l'anglais au français*** (3 crédits)
Préalable: TRAD 302 et 304. Étude des différents principes et des différentes techniques de la traduction littéraire; aperçu de la traduction littéraire au Canada. Travaux pratiques: analyse critique et comparaison de traductions et de leur original; traduction de textes anglais. (F)
NOTE: Les étudiant-e-s qui ont suivi FRAN 471 ne peuvent obtenir de crédits pour ce cours.

TRAD 403 ***Traduction technique du français à l'anglais*** (3 crédits)
Préalable: TRAD 201. Initiation aux différents domaines de la traduction technique et scientifique. Le semestre sera divisé en modules. Chaque module sera confié à un-e traducteur-trice spécialisé-e dans un domaine particulier. (A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 362 ne peuvent obtenir de crédits pour ce cours.

TRAD 404 ***Traduction technique de l'anglais au français*** (3 crédits)
Préalable: TRAD 202. Initiation aux différents domaines de la traduction technique et scientifique. Le semestre sera divisé en modules. Chaque module sera confié à un-e traducteur-trice spécialisé-e dans un domaine particulier. (F)
NOTE: Les étudiant-e-s qui ont suivi FRAN 363 ne peuvent obtenir de crédits pour ce cours.

TRAD 405 ***Traduction spécialisée du français à l'anglais*** (3 crédits)
Préalable: TRAD 201. Initiation aux différents problèmes de la traduction administrative, commerciale et juridique du français à l'anglais. Le cours sera divisé en modules. Chaque module sera confié à un-e traducteur-trice spécialisé-e dans un des domaines abordés. (A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 368 ne peuvent obtenir de crédits pour ce cours.

TRAD 406 ***Traduction spécialisée de l'anglais au français*** (3 crédits)
Préalable: TRAD 202. Initiation aux différents problèmes de la traduction administrative, commerciale et juridique de l'anglais au français. Le cours sera divisé en modules. Chaque module sera confié à un-e traducteur-trice spécialisé-e dans un des domaines abordés. (F)
NOTE: Les étudiant-e-s qui ont suivi FRAN 369 ne peuvent obtenir de crédits pour ce cours.

TRAD 408 ***Adaptation publicitaire*** (3 crédits)
Préalable: TRAD 201 ou 202. Initiation à l'adaptation de textes publicitaires. À partir d'exemples empruntés à la publicité écrite, radiophonique ou télévisée, les étudiant-e-s seront amené-e-s à se familiariser avec les problèmes linguistiques, affectifs, et sociaux soulevés par le travail d'adaptation. (F/A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 365 ne peuvent obtenir de crédits pour ce cours.

TRAD 409 ***Révision et correction en traduction*** (3 crédits)
Préalable: TRAD 301 et 303. Ce cours abordera les différentes méthodes de révision et de correction de textes rédigés ou traduits en anglais; il sensibilisera les étudiant-e-s aux aspects humains et techniques du métier de réviseur-e; on touchera aussi aux problèmes de l'évaluation de la qualité des traductions. (A)
NOTE: Les étudiant-e-s qui ont suivi TRAD 410 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 463 ne peuvent obtenir de crédits pour ce cours.

TRAD 410 ***Révision et correction en traduction*** (3 crédits)
Préalable: TRAD 302 et 304. Ce cours abordera les différentes méthodes de révision et de correction de textes rédigés ou traduits en français; il sensibilisera les étudiant-e-s aux aspects humains et techniques du métier de réviseur-e; on touchera aussi aux problèmes de l'évaluation de la qualité des traductions. (F)
NOTE: Les étudiant-e-s qui ont suivi TRAD 409 ne peuvent obtenir de crédits pour ce cours.
NOTE: Les étudiant-e-s qui ont suivi FRAN 463 ne peuvent obtenir de crédits pour ce cours.

TRAD 412 ***Théories de la traduction*** (3 crédits)
Préalable: TRAD 301 ou TRAD 304. Ce cours a pour but d'initier l'étudiant-e aux différentes théories actuelles de la traduction. On abordera, dans un premier volet du cours, les diverses notions théoriques, et on cherchera à tracer leur évolution. Dans un deuxième volet, on examinera les problèmes théoriques tels qu'ils se posent dans les différents domaines pratiques de la traduction. (F/A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 364 ne peuvent obtenir de crédits pour ce cours.

TRAD 414 ***Histoire de la traduction*** (3 crédits)
Préalable: TRAD 301 ou TRAD 304. Étude de la traduction depuis la Renaissance jusqu'à l'époque moderne. Ce cours traitera également certains des sujets suivants: l'histoire de la traduction au Canada, les politiques linguistiques au Canada, les traductions marquantes en anglais et en français. (F/A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 462 ne peuvent obtenir de crédits pour ce cours.

TRAD 416 ***Informatique et traduction*** (3 crédits)
Préalable: TRAD 201 ou 202. Terminologie de l'informatique. Applications de l'informatique à la traduction: traitement de textes, banques de données, banques de terminologie, traduction assistée par ordinateur. (F/A)

TRAD 420 ***Stage de formation: de l'anglais au français*** (6 crédits)
Préalable: 60 crédits en traduction et autorisation du ou de la coordinateur-trice des stages. Le stage a pour but d'initier l'étudiant-e à l'activité professionnelle dans le domaine de la traduction de l'anglais au français et de lui faire connaître le monde du travail. (Le département fera tout son possible pour faciliter l'obtention d'un stage mais ne peut s'engager à trouver un stage pour tous ou toutes les candidat-e-s). (F)
NOTE: Les étudiant-e-s qui ont suivi FRAN 465 ne peuvent obtenir de crédits pour ce cours.

TRAD 421 ***Stage de formation: du français à l'anglais*** (6 crédits)
Préalable: 60 crédits en traduction et autorisation du ou de la coordinateur-trice des stages. Le stage a pour but d'initier l'étudiant-e à l'activité professionnelle dans le domaine de la traduction du français à l'anglais et de lui faire connaître le monde du travail. (Le département fera tout son possible pour faciliter l'obtention d'un stage mais ne peut s'engager à trouver un stage pour tous ou toutes les candidat-e-s). (A)
NOTE: Les étudiant-e-s qui ont suivi FRAN 464 ne peuvent obtenir de crédits pour ce cours.

TRAD 498 ***Étude avancée d'un sujet particulier*** (3 crédits)

TRAD 499 ***Étude avancée d'un sujet particulier*** (6 crédits)

Les préalables de ces cours, ainsi que les sujets particuliers qui y sont étudiés, sont indiqués dans le *Undergraduate Class Schedule.*

31.120 Exercise Science

Chair
WILLIAM R. SELLERS, *Associate Professor*

Associate Professors
EDMUND F. ENOS
LOUIS W. JANKOWSKI
S. JOHN SULLIVAN

Assistant Professors
LISE GAUVIN
ROBERT D. KILGOUR
SHIPING MA
DAVID L. PARIS

Adjunct Assistant Professors
LARRY P. COUGHLIN
BARRY GAMBERG

Lecturer
GEORGE D. SHORT

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profile).

All incoming Exercise Science students enter the Major programme. Students seeking entry to an Honours programme must submit an application form to the EXCI Honours Adviser for review with respect to University and Departmental policy. The adviser will review all applications meeting policy regulations and will then direct these to the Faculty Honours Committee for final approval.

For entry into an Honours programme, students must submit an application to the EXCI Honours Adviser after completing the first year of the Major programme (i.e. 24 credits which include EXCI 201, 221, 253, 255, 261, 262 and CHEM 221, 222).

Students entering Honours, Specialization, and Major programmes should refer to §16.2.4, Academic Regulations, and §31.003.1 regarding G.P.A. regulations.

The BSc Honours in Exercise Science Athletic Therapy Option does not lead to certification as an athletic therapist by the Canadian Athletic Therapists Association.

Students must have completed the first year of the Major programme (i.e. 24 credits itemized in the Honours programme regulation) before transferring to the B.Sc. Specialization.

The BSc Specialization in Exercise Science follows option programmes *Adapted Physical Activity, Athletic Therapy, Community Fitness Science, Pre-Research* with the exclusion of the respective Internships (EXCI 460, 461, 463, 468). These are substituted by six (6) Exercise Science credits at the 400 level not already required in the option of study.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BSc Honours in Exercise Science: Adapted Physical Activity Option

Stage I
6 CHEM 221^3, 222^3
3 EXCI 221^3
15 EXCI 201^3, 253^3, 255^3, 261^3, 262^3

Stage II
15 EXCI 311^3, 321^3, 351^3, 353^3, 357^3

Stage III
18 EXCI 403^3, 404^3, 414^3, 456^3, 463^6
3 Chosen from EXCI 215^3, 308^3, 455^3

63 BSc Honours in Exercise Science: Athletic Therapy Option

Stage I
6 CHEM 221^3, 222^3
3 BIOL 203^3
3 EXCI 221^3
15 EXCI 201^3, 253^3, 255^3, 261^3, 262^3

Stage II
21 EXCI 311^3, 321^3, 335^3, 336^3, 351^3, 353^3, 357^3

Stage III
15 EXCI 414^3, 436^3, 456^3, 460^6

63 BSc Honours in Exercise Science: Community Fitness Science Option

Stage I
6 CHEM 221^3, 222^3
3 EXCI 221^3
15 EXCI 201^3, 253^3, 255^3, 261^3, 262^3

Stage II
21 EXCI 311^3, 321^3, 331^3, 351^3, 353^3, 357^3, 361^3

Stage III
15 EXCI 414^3, 421^3, 456^3, 461^6
3 Chosen from EXCI 215^3, 308^3, 455^3

65 BSc Honours in Exercise Science: Pre-Research Option

Stage I
6 CHEM 221^3, 222^3
3 EXCI 221^3
3 INTE 290^3
15 EXCI 201^3, 253^3, 255^3, 261^3, 262^3

Stage II
2 PHYS 295^2
3 CHEM 271^3
15 EXCI 311^3, 321^3, 351^3, 353^3, 357^3

Stage III
15 EXCI 411^3, 414^3, 456^3, 468^6
3 Chosen from EXCI 452^3, 454^3, 457^3

60-65 **BSc Specialization in Exercise Science**

Stages I — III

54-59 Credits required in the option of study *Adapted Physical Activity, Athletic Therapy, Community Fitness Science, Pre-Research, with the elimination of the 6-credit Internship (EXCI 460, 461, 463, 468)*

6 Chosen from EXCI 400-level courses

45 **BSc Major in Exercise Science**

Stage I

6 CHEM 221^3, 222^3

3 EXCI 221^3

15 EXCI 201^3, 253^3, 255^3, 261^3, 262^3

Stage II

15 EXCI 311^3, 321^3, 351^3, 353^3, 357^3

Stage III

6 EXCI 414^3, 456^3

*30 **Certificate in Outdoor Education**

18 EXCI 370^6, 470^6, 472^6

12 Elective credits chosen in consultation with the Coordinator of the Certificate Programme.

**NOTE: Acceptance into certificate programme is dependent upon possession of Bachelor's degree by applicant or graduation from the three-year CEGEP programme no. 391 (Recreation).*

Students may transfer into the Certificate programme up to six credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

EXERCISE SCIENCE CO-OPERATIVE PROGRAMME

Director

EDMUND F. ENOS, *Associate Professor*

The Exercise Science Co-operative Programme is offered to students who are enrolled in the Specialization in Community Fitness Science Option. Students interested in applying for the Exercise Science Co-op should refer to §23 where a full description of the admission requirements is provided.

Students in Exercise Science Co-op take the regular academic programme with the exception of the six credit practicum. Students must select six credits from a list of possible courses to replace the practicum requirement.

Each student is supervised personally and must meet the requirements specified by the Faculty of Arts and Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Exercise Science Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

EXCI 201 ***Introduction to Exercise Science*** (3 credits)

Prerequisite: Enrolment in an Exercise Science programme. The course examines from an historical perspective the philosophical and applied concepts of Exercise Science. There is particular emphasis on the development of the relationship between Exercise Science and the allied health professions. Lectures.

EXCI 215 ***Psychomotor Activities in Early Childhood*** (3 credits)

This course considers the implementation of physical activities on the basis of psychomotor growth and development in children. Issues such as weight training, anaerobic training and aerobics for children lend themselves to discussion in this course, as do the effects of participation in competitive sport on psychosocial and personality development. Topics addressed are aquatic programmes for infants; movement education; gender differences in planning appropriate activities. Consideration is given to adaptation of activities for children with special physical and mental needs. Lectures and laboratories.

EXCI 221 ***Statistical Procedures in Exercise Science*** (3 credits)

This is an introductory course in statistics, presented in an applied health science context. It addresses measures of central tendency, various correlational techniques, an introductory analysis of variance and a brief introduction to the use of computer programmes. Lectures only.

EXCI 251 ***Basics of the Science of Movement*** (3 credits)

Anatomical, physiological and kinesiological aspects of movement are presented. Acute and chronic responses to exercise and the development of fitness programmes are studied. Detrimental as well as beneficial responses are considered. Lectures and laboratories.

NOTE: Students registered in the Major, Specialization, and Honours programmes may not take this course for credit.

EXCI 253 ***Human Anatomy I: The Extremities*** (3 credits)

Prerequisite: Enrolment in an Exercise Science programme or permission of the instructor. Following an introduction to anatomical terminology, definitions and tissues, the course concentrates on the Appendicular Skeleton. The skeletal and muscular systems of the upper and lower extremities are studied in depth. The circulatory and peripheral nervous systems of these areas are also presented to better understand the complete regional relationship for subsequent study in core courses in EXCI. Lectures and laboratories.

EXCI 255 ***Human Anatomy II: Head, Neck, and Torso*** (3 credits)
Prerequisite: EXCI 253. The course considers the axial skeleton with emphasis on the nervous, cardiovascular and respiratory systems. Consideration is also given to the muscular, digestive, urinary, and reproductive systems. Lectures and laboratories.

EXCI 261 ***Principles of Physical Conditioning*** (3 credits)
The major thrust of this course is a practical experience in adult physical activities, e.g., industrial fitness. This includes a conditioning as well as a skill development component. Lectures and special projects relate the physical activities to theoretical concepts. Lectures and laboratories.
NOTE: This course was first offered in the present form in the 1981-82 academic year.

EXCI 262 ***Emergency Care in Exercise and Sport*** (3 credits)
Prerequisite: EXCI 253. This course identifies common injuries and acute pathological conditions associated with physical activity. Students learn to recognize the injury and perform emergency or initial treatment. The "how" and "why" of emergency treatment are covered. Lectures and laboratories.
NOTE: Students who have received credit for EXCI 337 may not take this course for credit.

EXCI 298 ***Selected Topics in Exercise Science*** (3 credits)

EXCI 299 ***Selected Topics in Exercise Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

EXCI 303 ***Nutrition in Exercise and Sport*** (3 credits)
The structure and function of the three categories of foodstuffs as well as the role of the various vitamins and minerals are examined. The course also deals with weight control, nutrition for athletes and special populations. Topics such as fad diets, nutrition texts, health foods, supplements, environmental effects on the food chain, and nutritional research are discussed.

EXCI 308 ***Physical Growth and Maturation*** (3 credits)
This course considers normal and abnormal growth and maturation patterns of the body's systems (musculoskeletal, neural, hormonal, cardiovascular and respiratory) as well as processes of socialization and psychosocial development in an exercise or sports environment. Time frame encompasses childhood through adolescence and adulthood. Lectures.
NOTE: Students who have received credit for EXCI 309 may not take this course for credit.

EXCI 311 ***Introduction to Psychomotor Behaviour*** (3 credits)
Prerequisite: EXCI 221. This course examines the acquisition and performance of skilled motor behaviour. An information processing model is used to identify the major mechanisms involved in the production of skilled movement, and a social psychological approach is employed to illustrate how cognitive, emotional, social, and behavioural factors can influence motor performance.

EXCI 321 ***Measurement and Analysis in Exercise Science*** (3 credits)
Prerequisite: EXCI 221. Students are introduced to measurement processes pertinent to Exercise Science. Concepts of data collection, data presentation, validity, reliability, objectivity, precision and accuracy are discussed. Lectures and laboratories.

EXCI 331 ***Health Sciences*** (3 credits)
This course considers topics common to professionals working in health maintenance and preventive medicine. Specifically, the course synthesizes knowledge from biological, epidemiological, psychological, and medical sciences to 1) address health risk factors, 2) examine intervention strategies, and 3) identify programmes and resources presently available in the community. Lectures.
NOTE: EXCI students may take EXCI 331 or EXCI 333, but not both.

EXCI 333 ***Personal and Community Health Problems*** (3 credits)
This course presents an overview of factors influencing personal and community health. Students are exposed to prevalent physical and mental health issues from biological, psychological, and sociological points of view. Health related consequences of alcohol abuse, drugs, birth control, sedentary lifestyle, eating disorders and communicable diseases are among the topics considered. Lectures.
NOTE: EXCI students may take EXCI 331 or EXCI 333, but not both.

EXCI 335 ***Principles of Athletic Therapy*** (3 credits)
Prerequisite: EXCI 262. This course examines mechanisms of acute and chronic pathologies associated with physical activity. Preventive techniques such as protective equipment, hazard recognition, prophylactic taping are addressed. The student also receives extensive exposure to pre-event and field protocols including strength and flexibility assessment. Lectures and laboratories.

EXCI 336 ***Assessment and Rehabilitation of Athletic Injuries*** (3 credits)
Prerequisite: EXCI 335. This course examines clinical assessment techniques and general rehabilitation protocols.Topics include chart recording, tissue healing, joint biochemics, normal and atypical posture, and gait analysis. Surgical procedures of orthopaedic injuries to the spine and lower and upper extremities, and concomitant rehabilitation programmes are presented. Lectures and laboratories.
NOTE: Students who have received credit for EXCI 433 may not take this course for credit.

EXCI 351 ***Introduction to the Biomechanics of Human Movement*** (3 credits)
Prerequisite: EXCI 255. This course concentrates on the mechanical principles pertinent to an understanding of human movement. Fundamental principles of kinematics and kinetics are examined in a theoretical and practical context. Lectures and laboratories.
NOTE: Students who have received credit for EXCI 451 may not take this course for credit.

EXCI 353 ***Human Physiology*** (3 credits)
Prerequisite: CHEM 222; EXCI 255. This course introduces the student to the functional organization of the human body. Cell physiology, metabolism, thermoregulation, endocrine function, reproduction, neural and muscular physiology are presented. Lectures and laboratories.

EXCI 357 ***Cardiovascular-Respiratory Physiology*** (3 credits)
Prerequisite: EXCI 353. This course introduces the student to those mechanisms and systems which are of primary importance in the metabolic processes of exercise. The function of renal, cardiac, circulatory and respiratory physiology are detailed. Lectures, laboratories.

EXCI 361 ***Exercise Leadership*** (3 credits)
Prerequisite: EXCI 261. This course provides students with the opportunity to develop, administer, supervise and evaluate exercise programmes for a variety of populations in community and institutional settings. Lectures and laboratories.

EXCI 363 ***Behavioural Aspects in Exercise Science*** (3 credits)
This course introduces students to theory and research from the social and psychological sciences as they apply to exercise, sport and physical activity. Topics include personality motivation, anxiety, mental preparation, concentration, mental health and exercise adherence. Special attention is given to social psychological knowledge as it applies to athletic therapy, adapted physical activity, fitness and lifestyle.

EXCI 370 ***Outdoor Recreation and Leadership*** (6 credits)
This course focuses on using and understanding the environment as a setting for recreation. Learning by experience is emphasized. Potential leaders and administrators in outdoor recreation or outdoor education will find this course of value. Lectures, laboratories: weekend field trips to be arranged.

EXCI 398 ***Selected Topics in Exercise Science*** (3 credits)

EXCI 399 ***Selected Topics in Exercise Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

EXCI 403 ***Adapted Physical Activity*** (3 credits)
Prerequisite: EXCI 357. The course is an introduction to current methods used to modify physical activities and sports for the disabled. A history of corrective and adapted sports is followed by a rationale and techniques employed when planning and conducting activity programmes for people with specific, chronic physical impairments and mental deficiencies. Lectures, practical experiences.
NOTE: Students who have received credit for EXCI 402 may not take this course for credit.

EXCI 404 ***Therapeutic Exercise Physiology*** (3 credits)
Prerequisite: EXCI 403. The course introduces the student to the role and use of exercise in the treatment of specific physiopathologies. Metabolic syndromes, cardiovascular diseases and respiratory disorders in which therapeutic exercise is either beneficial or contraindicated are emphasized. Lectures.
NOTE: Students who have received credit for EXCI 401 may not take this course for credit.

EXCI 411 ***Research Design*** (3 credits)
Prerequisite: EXCI 221; EXCI 357, recommended to be concurrent with EXCI 456; EXCI 468. Through lectures and laboratory experience, students are exposed to various research designs including: descriptive survey, historical survey, experimental and analytical design. Presentation and interpretation of data as well as guidelines for writing a research paper are covered. Lectures, seminars and laboratories.

EXCI 412 ***Advanced Methods and Materials in Physical Education and Recreation*** (6 credits)
Prerequisite: Permission of the Department. The interactive behaviour between student and teacher is approached scientifically. Among topics considered are history and philosophy of physical education, modern trends in education and their adaptation to the physical education field, Mosston's spectrum of styles, T.E.T. (Teacher Effectiveness Training), learning performance criteria, pupil's perception of teacher influence, behavioural objectives, values clarification, leadership theory, curriculum and daily lesson planning. In the laboratory periods, students are given the opportunity to practise various methodological techniques on peers and on adolescents and young adults in academic or recreational settings.

EXCI 414 ***Neural Control of Human Movement*** (3 credits)
Prerequisite: EXCI 311; EXCI 351; EXCI 353. This course examines the major neural mechanisms involved in the control of posture and movement. Lectures and laboratories.
NOTE: Students who have received credit for EXCI 313 or EXCI 317 may not take this course for credit.

EXCI 421 ***Fitness and Sport Management*** (3 credits)
The course considers the administration and management of commercial and community fitness and sports facilities. Concepts include organization of competitive and non-competitive events, budget control, marketing techniques, provincial and federal laws, and safety regulations.

EXCI 436 ***Current Topics in Sports Medicine*** (3 credits)
Prerequisite: EXCI 336; EXCI 456. Selected topics from the current literature dealing with health oriented aspects of involvement in sport are examined. Lectures and seminars.

EXCI 452 ***Advanced Biomechanics of Human Movement*** (3 credits)
Prerequisite: EXCI 351. This course concentrates on the use of advanced biomechanical techniques in the understanding of dynamic human movement. Topics include link segment modelling, mechanical energy and power techniques, as well as computer applications. Lectures and laboratories.

EXCI 454 ***Clinical Kinesiology*** (3 credits)
Prerequisite: EXCI 351; EXCI 414. This course explores the kinematic, kinetic and muscular parameters related to the clinical evaluation of normal and pathological movements.
NOTE: Students who have received credit for EXCI 417 may not take this course for credit.

EXCI 455 ***Preventive Medicine and Geriatrics*** (3 credits)
Prerequisite: EXCI 357 or permission of the Department, recommended to be concurrent with EXCI 456. This course examines the role of physical activity as it relates to the physiological, psychological and sociological needs which accompany the aging process. Activities are explored in view of their preventive, rehabilitative and/or adaptive benefit to the aged population. Lectures and laboratories.

EXCI 456 ***Physiology of Exercise*** (3 credits)
Prerequisite: EXCI 357. This course examines the acute and chronic physiological responses of the individual's participation in physical activity. Special emphasis is placed on muscle energetics, regulation of metabolic pathways, cardiovascular and respiratory adjustments to exercise. Basic training techniques and exercise prescriptions designed to enhance work capacity are addressed. Lectures and laboratories.

EXCI 457 ***Advanced Physiology of Exercise*** (3 credits)
Prerequisite: EXCI 456. The course concentrates on advanced laboratory techniques used in the study of human adaptation to exercise and training. Topics and techniques focus on metabolic, cardiovascular, and respiratory changes associated with activity. Lectures and laboratories.

EXCI 460 ***Athletic Therapy Internship*** (6 credits)
Prerequisite: This course is open to Honours students who have completed 60 credits in the Athletic Therapy Option. The course offers a supervised period of work in a rehabilitation or athletic therapy clinic and/or in an emergency or preventative setting with an athletic team. The course involves a commitment of 240 hours which will include specific evaluation procedures and subsequent treatments and a weekly seminar.

EXCI 461 ***Community Fitness Science Internship*** (6 credits)
Prerequisite: This course is open to Honours students who have completed 60 credits in the Community Fitness Science Option. The general objective of the Community Fitness Internship is to expose students to a fitness-related environment where they will gain experience in the operation of the fitness industry as it functions in a community and private setting. Throughout the 240 hours, students may be introduced to a variety of specific activities such as: fitness class instruction, fitness testing and evaluation; and programme planning and development.

EXCI 463 ***Adapted Physical Activity Internship*** (6 credits)
Prerequisite: This course is open to Honours students who have completed 60 credits in the Adapted Physical Activity Option. The course offers a supervised period of work as activity leader or exercise technician in a hospital or rehabilitation centre or similar institution, a technician assisting in physiological evaluation or a related position. The course involves a commitment of 240 hours including a weekly seminar.

EXCI 468 ***Pre-Research Internship*** (6 credits)
Prerequisite: This course is open to Honours students who have completed 60 credits in the Pre-Research Option. In consultation with a faculty supervisor, students are given the opportunity to study laboratory measurements, data collection and treatment, statistical analyses, data illustration and professional presentations or other activities in a research setting. The course involves a commitment of 240 hours including a weekly seminar.

EXCI 470 ***Scientific Principles of Outdoor Education*** (6 credits)
The course offers a comprehensive analysis of outdoor education. The aims and objectives of outdoor education are examined; organization and administration of model programmes are analyzed; innovative units of instruction and outdoor education programmes are evaluated. Students plan, teach and participate in outdoor learning experiences. Lectures, laboratories, seminars and field study. This is an intensive four-week summer course that involves participation on some weekends as well as regular classroom study. Alternate summers.

EXCI 472 ***Outdoor Education — Administration and Implementation*** (6 credits)
The course explores use of the out-of-doors to enrich the school curriculum. In addition, outdoor education as a strategy in the wider context of education is examined. Students receive instruction in skills necessary for planning, administering and implementing outdoor education programmes. The philosophical base for this educational approach is assessed, particularly as it pertains to interdisciplinary methods in the elementary and high school curricula. This is an intensive four-week summer course that involves participation on some weekends as well as regular classroom study. Alternate summers.

EXCI 491 ***Independent Study in Exercise Science*** (6 credits)
Prerequisite: Permission of the Department. Students work on topic(s) chosen in consultation with their department supervisor. The study can include readings, field studies, interviews, and field work. An in-depth report of the activities conducted by the student is presented to the supervisor upon completion of the course.

EXCI 498 ***Advanced Topics in Exercise Science*** (3 credits)

EXCI 499 ***Advanced Topics in Exercise Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.130 Geography

Chair
I. MAX BARLOW, *Associate Professor*

Professor
BRIAN SLACK

Associate Professors
S. ROBERT AIKEN
DAVID B. FROST
MICHAEL MARSDEN
SUSAN SHEETS-PYENSON
PATRICIA A. THORNTON
JAMES W. YOUNG

Assistant Professors
JACQUELINE M. ANDERSON
DAVID F. GREENE
ALLAN E. NASH
JOHN M. UDY

Lecturers
DOREEN MOORE
JOHN ZACHARIAS

BSc Programmes
Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Honours in Geography
Pattern A: Physical Geography
Stage I
15 GEOG 211^6, 267^3, 271^6
Stage II & III
9 GEOG 347^3, 361^3, 362^3
12 Chosen from GEOG 371^6, 372^6, 373^6
Stage III
12 GEOG 369^3, 391^3, 491^6
6 400-level GEOG credits chosen with approval of Geography adviser
3 Elective credits in Geography at the 300-400 level
3 Non-Geography elective credits approved by the Department

Pattern B: Human Geography
Stage I
15 GEOG 211^6, 267^3, 271^6
Stages II & III
9 GEOG 347^3, 361^3, 362^3
12 Chosen from GEOG 312^3, 315^3, 317^3, 325^3, 331^6, 358^3, 359^3
Stage III
12 GEOG 369^3, 391^3, 491^6
9 Elective credits in Geography at the 300-400 level chosen with approval of the Geography adviser
3 Non-Geography elective credits approved by the Department

60 BA Specialization in Geography
Pattern A: Physical Geography
Stage I
15 GEOG 211^6, 267^3, 271^6
Stage II
9 GEOG 347^3, 361^3, 362^3
12 Chosen from GEOG 371^6, 372^6, 373^6
Stage III
6 GEOG 369^3, 391^3
6 400-level GEOG credits chosen with approval of Geography adviser
9 Elective credits in Geography at the 300-400 level
3 Non-Geography elective credits approved by the Department

Pattern B: Human Geography
Stage I
15 GEOG 211^6, 267^3, 271^6
Stage II
9 GEOG 347^3, 361^3, 362^3
12 Chosen from GEOG 312^3, 315^3, 317^3, 325^3, 331^6, 358^3, 359^3
Stage III
6 GEOG 369^3, 391^3
15 Elective credits in Geography at the 300-400 level chosen with approval of Geography adviser
3 Non-Geography elective credits approved by the Department

75 BSc Specialization in Resource Analysis and Land Use
See Section 31.140, Geology

42 BA Major in Geography
Stage I
15 GEOG 211^6, 267^3, 271^6
Stage II
9 GEOG 347^3, 361^3, 362^3
Stage III
15 GEOG elective credits at the 300-400 level
3 Non-Geography elective credits approved by the Department

60 BA Specialization in Human-Environment Relationships
Stage I
15 GEOG 211^6, 267^3, 275^3, 276^3
Stage II
12 GEOG 305^6, 361^3, 362^3
Stage III
6 GEOG 405^6

Stages II and III

27 Chosen from List A and List B including at least 6 credits and no more than 24 credits in Geography. No more than 6 credits may be at the 200 level.

List A
GEOG 371[6], 372[6], 477[3]
BIOL 207[3], 240[3]*, 250[3]*, 345[3]*, 352[3]*, 355[3]*, 357[3]*, 398[3]*, 452[3]*, 454[3]*
CHEM 208[3], 302[2], 304[3]
GEOL 332[3]*, 424[3]
PHYS 270[3], 273[3]

List B
GEOG 306[3], 315[3], 317[3], 357[6]
ECON 391[3]*, 396[3]*
POLI 361[3], 363[3], 385[3], 421[3], 461[3], 462[6], 465[3]
SOCI 323[3]*, 324[3]*, 327[3]*, 328[3]*
SCHA 253[3], 254[3]

**These courses have prerequisites which are not included in these lists. Please consult the calendar.*

42 BA Major in Human-Environment Relationships

Stage I
15 GEOG 211[6], 267[3], 275[3], 276[3]
3 Non-GEOG electives approved by an adviser

Stage II
6 GEOG 305[6]
6 GEOG 371[6], 372[6]

Stage III
6 GEOG 405[6]
6 Chosen from GEOG 306[3], 315[3], 317[3], 352[3], 353[3], 357[6]

66 BSc Specialization in Geography
15 GEOG 211[6], 267[3], 271[6]
12 Chosen from GEOG 371[6], 372[6], 373[6], 475[3], 476[3], 477[3]
39 Chosen from one of the following groups: Environmental Geography, Hydrology. Selection of a coherent programme must be made in consultation with the departmental adviser. No more than 27 may be Geography credits.

ENVIRONMENTAL GEOGRAPHY
GEOG 362[3], 371[6], 372[6], 373[6], 477[3]
BIOL 240[3], 242[3], 250[3], 270[3], 341[3], 344[3], 352[3], 355[3], 356[3], 357[3], 398[3], 452[3], 454[3], 480[3]
PHYS 243[3], 244[3], 273[3], 291[1], 292[1]
GEOL 212[3]
MATH 210[3], 271[3], 310[3], 371[3]

HYDROLOGY
GEOG 362[3], 372[6], 373[6], 476[3], 477[3]
BIOL 240[3], 250[3], 355[3], 454[3]
CHEM 302[2]
GEOL 210[3], 213[3], 224[3]
MATH 210[3], 261[6], 271[3], 371[3]
PHYS 243[3], 244[3], 291[1], 292[1], 334[3], 393[1]

NOTE: Many non-Geography courses require prerequisites that are not part of the Geography Programme.

42 BSc Major in Geography
9 GEOG 267[3], 271[6]
12 Chosen from GEOG 371[6], 372[6], 373[6], 475[3], 476[3], 477[3]
21 Chosen from the group of courses listed as Environmental Geography under the BSc Specialization in Geography.

30 Minor in Geography
12 GEOG 211[6], 271[6]
3 GEOG 267[3]
15 GEOG Elective credits at the "300" or "400" level

Students in programmes leading to the BSc degree may take the courses in Geography listed below for credits to be applied to their programme of concentration.

GEOG 267	Introductory Cartography	(3 credits)
GEOG 271	The Natural Environment	(6 credits)
GEOG 275	Climate and the Biosphere	(3 credits)
GEOG 276	Landforms and the Biosphere	(6 credits)
GEOG 362	Quantitative Geography I	(3 credits)
GEOG 366	Intermediate Cartography	(3 credits)
GEOG 371	Biogeography	(6 credits)
GEOG 372	Analysis of the Environment	(6 credits)
GEOG 373	Climatology	(6 credits)
GEOG 462	Advanced Cartography	(3 credits)
GEOG 475	Hydrology I	(3 credits)
GEOG 476	Hydrology II	(3 credits)
GEOG 477	The Geography of Soils	(3 credits)

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

GEOG 202 ***Habitat and Society*** (3 credits)
A general introduction to the relationship between physical and cultural distributions on the earth's surface. Global patterns of human, economic and natural resources are examined.

GEOG 211 ***Introduction to Human Geography*** (6 credits)
A study of the evolution of the earth's populated areas and the gradual enlargement of geographical horizons. The emphasis is on cultural distributions, landscape and settlement, and the geography of economic, social, and political activities.

GEOG 267 ***Introductory Cartography*** (3 credits)
This course covers the nature and scope of cartography. An examination of the compilation and design of topographic and thematic maps provides insight into the strengths and limitations of maps as vehicles for representing spatial information.
NOTE:Students who have received credit for GEOG 262 may not take this course for credit.

GEOG 271 ***The Natural Environment*** (6 credits)
An introduction to the earth sciences as they relate to the biophysical environment, with special emphasis on weather, climate, and the evolution of landscape.
NOTE: Students who have received credit for either GEOG 275 or 276 may not take this course for credit.

GEOG 273 ***The Sea*** (6 credits)
A physical, historical, and human geography of the world ocean. The course includes an introduction to oceanography, navigation, and elementary geophysics, as well as an account of travels and discovery ending with modern scientific exploration of the deeps. Topics include coasts and islands; ports, ships, and shipping; submarine topography; waves, tides, and earthquakes; marine life, fish, and fisheries.

GEOG 275 ***Climate and the Biosphere*** (3 credits)
A study of the energy systems of the atmosphere and an introduction to environmental geography. The hydrologic cycle, world climates, and weather systems. Interrelationships in the biosphere and human impact upon them. Weather and climate maps are also studied. Lectures: 3 hours per week, including laboratory.
NOTE: Students who have received credit for GEOG 271 may not take this course for credit.

GEOG 276 ***Landforms and the Biosphere*** (3 credits)
An introduction to the energy systems of the earth's crust and oceans, and the processes that have shaped our environment. The evolution of land forms and human impact upon landscapes. The Pleistocene and Recent epochs in Canada, and their effects on soils and land use. The study of relevant topographic land-use maps and aerial photographs. Lectures: 3 hours per week, including laboratory.
NOTE: Students who have received credit for GEOG 271 may not take this course for credit.

GEOG 298 ***Selected Topics in Geography*** (3 credits)

GEOG 299 ***Selected Topics in Geography*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule and the Geography Course Guide.

GEOG 305 ***Cultural and Historical Perspectives on Human-Environment Relations*** (6 credits)
Prerequisite: Fifteen credits in Geography. This tutorial provides a conceptual, global, and holistic approach to environmental issues. It examines the role of economy, social institutions and values in shaping human relationships to the environment, and how those relationships have changed over time. It is concerned with applying a geographical perspective to environmental issues, developing theory and concepts and fostering an appreciation of the fundamentally interdependent nature of our world as it relates to the environment, the global dimensions of environmental problems, and the place/time context in which they exist.

GEOG 306 ***The Tropical Rain Forest*** (3 credits)
Prerequisite: 6 GEOG credits or permission of the Department. The course focuses on three themes: how tropical forest ecosystems function and change; the causes and consequences of forest conversion, and the relations between conservation and sustainable development. The course concludes with a detailed case study. Lectures only.
NOTE: If credit has been received for this topic under a 398 or 498 number, this course may not be taken for credit.

GEOG 312 ***Political Geography*** (3 credits)
Prerequisite: GEOG 211 or permission of the Department. The course is structured around traditional and contemporary themes in political geography. Emphasis is on the political/administrative organization of space, the interrelationships between politics and environment, electoral geography, and the geographical aspects of public policy.

GEOG 313 ***Montréal: Habitat and Society*** (6 credits)
Prerequisite: GEOG 211, or permission of the Department. The course is an introduction to the urban geography of Montréal, both past and present. Three themes are investigated. They are: (a) "habitat": the biophysical environment of the site, the growth of the physical fabric of the city, and the evolution of its architectural forms; (b) "Society and ways of life": the origins and growth of population, the ethnic and cultural heritage of the city, and the pattern of social areas within the metropolitan region; and (c) "the contemporary urban scene": the personality of the city's landmarks, nodes, streetscapes, and districts. Fieldwork is an important part of the course.

GEOG 315 ***Cultural Geography*** (3 credits)
Prerequisite: GEOG 211, or permission of the Department. Cultural Geography is concerned with the application of the concept of culture to geographic problems. Attention is focused on the spatial *patterning*

of material and non-material elements of culture (culture areas); on the *processes* of cultural, temporal, and spatial change; on the *relationships* between people and land (cultural ecology); and especially on how these relationships are reflected in different *ensembles* of people and land (cultural landscapes).
NOTE: Students who have received credit for GEOG 316 may not take this course for credit.

GEOG 317 ***Population Geography*** (3 credits)
Prerequisite: GEOG 200 or GEOG 211, or permission of the Department. The characteristics, dynamics, and distribution of world populations. Census data and techniques of census analysis. Rural/urban populations and their varying proportions. The vital processes of population change; natural increase and migration. Growth rates, population policies, and population pressure. Study of selected groups. The demographic prospects.

GEOG 325 ***Introduction to Historical Geography*** (3 credits)
Prerequisite: GEOG 211 or permission of the Department. This course aims to develop a geographical understanding of the past for its own sake and for its relevance to interpreting present geographical patterns of population, settlement and economic activity. The focus is on sources and techniques in historical geography. These are demonstrated through case studies of selected themes and problems.

GEOG 331 ***Urban Geography*** (6 credits)
Prerequisite: GEOG 211 or URBS 280, or permission of the Department. The courses focuses on the contemporary western city. It explores the spatial structure of national systems of cities, and examines internal land use and social and political patterns. A major concern is the application of geographical ideas and concepts to modern urban problems.

GEOG 347 ***Geography of Canada*** (3 credits)
Prerequisite: Six credits in Geography or permission of the Department. An overview of the bases of regional differentiation in Canada. The course provides an analysis of cultural landscapes, the space economy and environmental issues.
NOTE: Students who have received credit for GEOG 341 may not take this course for credit.

GEOG 352 ***Geography of Recreation*** (3 credits)
Prerequisite: GEOG 211 or 30 credits in the Leisure Studies Programme or permission of the Department. The course examines the geographical aspects of recreation. The approaches followed are from the viewpoints of spatial patterns, landscape analysis and environmental issues. The topics studied are within the framework of (i) recreation in the countryside and (ii) recreation in the city. Specific topics include national parks, recreation land capability analysis, landscape evaluation, and city parks.
NOTE: Students who have received credit for GEOG 356 may not take this course for credit.

GEOG 353 ***International Tourism*** (3 credits)
Prerequisite: GEOG 211 or 30 credits in the Leisure Studies Programme or permission of the Department. The course examines the geographical aspects of international tourism. Topics studied include: the analysis of tourist flows, the role of tourism in area development, the spatial aspects of selected elements of tourism (such as transportation and marketing) and geographical analysis of resort cities.
NOTE: Students who have received credit for GEOG 356 may not take this course for credit.

GEOG 357 ***Resource Analysis*** (6 credits)
Prerequisite: GEOG 211, or permission of the Department. Focus is on the geographer's role in resource analysis. Problems of resource inventories and allocations between users, present and future, are examined with examples drawn from land use, energy, forestry and fishing. The allocation question includes problems of perceptions and attitudes of resource users. Attention is given to natural hazard research, and to institutional and policy models for resource management.

GEOG 358 ***Economic Geography I*** (3 credits)
Prerequisite: GEOG 211 or permission of the Department. This course deals with the spatial organization of agricultural land use, industrial patterns and networks, with some attention given to tertiary activities and urban land use. The focus is on the classical location theories — Von Thunen, Weber, Lösch and Christaller - and their application to behaviour in the real world, characterized by individual and corporate decision-making. Selected examples of real-world distribution are considered.

GEOG 359 ***Economic Geography II*** (3 credits)
Prerequisite: GEOG 211; GEOG 358, or permission of the Department. The aim is to integrate the various aspects of GEOG 358 by focusing on the question of regional systems and development. The course examines various models of regional structure, such as: the heartland-periphery paradigm and integrated spatial systems. Consideration is given to current restructuring of the spatial division of labour.

GEOG 361 ***Introduction to Geographical Research*** (3 credits)
Prerequisite: Six credits in Geography, or permission of the Department. The course introduces students to the methods and techniques used to acquire original geographical information in the field, laboratory, and archives. The course may include a week-end field camp.

GEOG 362 ***Quantitative Geography I*** (3 credits)
Prerequisite: Twelve credits in Geography, or permission of the Department. An introductory course in the applications of descriptive and analytical statistical techniques in Geography. Lectures and laboratory.
NOTE A/See §200.7

GEOG 366 ***Intermediate Cartography*** (3 credits)
Prerequisite: Permission of the Department. The focus of this course is the detailed study of the nature of graphic variables together with their implementation, by traditional and computer methods, in black and white small scale mapping. The course includes lectures, seminars, practical assignments and relevant field trips.

GEOG 369 ***Field Studies in Geography*** (3 credits)
Prerequisite: GEOG 361, or permission of the Department. A field course in which a selected area is intensively studied.

GEOG 371 ***Biogeography*** (6 credits)
Prerequisite: GEOG 271, or permission of the Department. A study of the distribution of plants and animals, with emphasis on their soil and climatic inter-relations. Relevant field trips are included.

GEOG 372 ***Analysis of the Environment*** (6 credits)
Prerequisite: GEOG 271, or permission of the Department. A review of modern theories and techniques in geomorphology, hydrology, pedology, denudation chronology, and landscape classification. The course includes a discussion of the Pleistocene Epoch in terms of applied research methods.

GEOG 373 ***Climatology*** (6 credits)
Prerequisite: GEOG 271, or permission of the Department. The broad aspects of world regional climates considered from the point of view of both physical and dynamic climatology. The course includes practical work.

GEOG 391 ***History of Geographical Thought*** (3 credits)
Prerequisite: Eighteen credits in Geography or permission of the Department. A study of the development of the field of geography from ancient times down to the present. Representative geographical works of the Greeks, the Romans, and of the Middle Ages, the Age of Discovery, the nineteenth and twentieth centuries are examined and discussed. The present-day concepts of the field and function of geography receive special attention.

GEOG 398 ***Selected Topics in Geography*** (3 credits)

GEOG 399 ***Selected Topics in Geography*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule and Geography Course Guide.

GEOG 405 ***Geographic Perspectives on Current Environmental Problems and Issues*** (6 credits)
Prerequisite: GEOG 305. This is the second of a linked pair of tutorial courses. It examines environmental planning and management, and the context, method and practice of environmental impact assessment. The course uses a case-study approach to these topics.

GEOG 433 ***Applied Urban Geography*** (6 credits)
Prerequisite: GEOG 331, or permission of the Department. An applied course in urban design and land use planning. An overview of current theory and practice is balanced, during the second term, by studio planning projects emphasizing a team approach.
NOTE: Students who have received credit for GEOG 401, INTE 480 or URBS 433 may not take this course for credit.

GEOG 462 ***Advanced Cartography*** (3 credits)
Prerequisite: GEOG 366. This course exposes students to many of the issues and problems faced by the cartographer in compiling, designing and producing colour maps. A laboratory assignment of a practical nature forms an important part of the course.
NOTE: Students who received credit for GEOG N-466 in 1975-76 may not take this course for credit.

GEOG 475 ***Hydrology I*** (3 credits)
Prerequisite: GEOG 271, and one of GEOG 371, 372, or 373, or permission of the Department. Theories and practice of hydrology, with emphasis on geographical aspects and resource utilization. Includes introduction to glaciology.

GEOG 476 ***Hydrology II*** (3 credits)
Prerequisite: GEOG 475. Soil moisture experiments, textural analysis, hydrological models, and field trips.

GEOG 477 ***The Geography of Soils*** (3 credits)
Prerequisite: GEOG 271; GEOG 371 or GEOG 372 or GEOG 373, or permission of the Department. This course examines the basic properties of soils and the processes operating within them. The major soil types and their distribution are surveyed together with aspects of soil degradation. Lectures, laboratory and field work.
NOTE: If credit has been received for this topic under a GEOG 498 number, this course may not be taken for credit.

GEOG 491 ***Honours Essay*** (6 credits)
Prerequisite: Permission of the Department. The course requires the student to propose and conduct a research project and to produce a substantial report under the supervision of a faculty adviser.

GEOG 498 ***Advanced Topics in Geography*** (3 credits)

GEOG 499 ***Advanced Topics in Geography*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule and Geography Course Guide.

31.140 Geology

Chair
KALYAN K. MUKHERJI, *Associate Professor*

Professors
STEPHEN KUMARAPELI
DAVID J. McDOUGALL

Associate Professors
HENRY S. de ROMER
JOHN T. JENKINS
GIAMPAOLO P. SASSANO

Adjunct Assistant Professor
KAREN ST. SEYMOUR

In addition to programmes in geology, the Department, in cooperation with Physics, Chemistry and Biochemistry, Geography and Biology Departments, offers four geology-based interdisciplinary programmes. The Geology-Physics and Geology-Chemistry programmes are designed for students who wish to pursue careers in Geophysics and Geochemistry respectively, through subsequent job training or graduate studies. The programme in Resource Analysis and Land Use is designed to develop the conceptual and technical facility to enable graduating students to make objective judgements regarding the resource potential and land use of a geographical region. The programme in Geology-Ecology is designed to provide a strong foundation in geology with an orientation towards ecology as a subdiscipline of biology.

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

69 BSc Honours in Geology

Stage I
18 GEOL 210^3, 211^3, 212^3, 213^3, 216^3, 231^3
3 COMP 212^3
3 Chosen from BIOL 322^3, GEOG 362^3

Stage II
24 GEOL 311^6, 313^3, 314^3, 316^3, 318^3, 331^3, 332^3

Stage III
21 GEOL 411^6, 413^3, 414^6, 415^3, 417^3

63 BSc Specialization in Geology

Stage I
18 GEOL 210^3, 211^3, 212^3, 213^3, 216^3, 231^3
3 COMP 212^3
3 Chosen from BIOL 322^3, GEOG 362^3

Stage II
24 GEOL 311^6, 313^3, 314^3, 316^3, 318^3, 331^3, 332^3

Stage III
15 GEOL 411^6, 413^3, 415^3, 417^3

83 BSc Specialization in Geology-Physics

Stage I
30 GEOL 210^3, 211^3, 212^3, 213^3; PHYS 232^3, 243^3, 253^3, 254^3; MATH 262^3, 263^3

Stages II & III
24 GEOL 216^3, 231^3, 311^6, 331^3, 332^3, 415^3, 422^3
9 Chosen from GEOL 232^3 and Geology 300- and 400-level courses
10 PHYS 291^1, 293^1, 295^2, 334^3, 364^3
10 Chosen from PHYS 244^3, 252^3, 292^1, 294^1, 297^1, 335^3, 336^3, 393^3, 394^1, 465^3, 495^1

82-83 BSc Specialization in Geology-Chemistry

Stage I
30 GEOL 210^3, 211^3, 212^3, 213^3, 216^3; CHEM 217^3, 218^3, 241^3, 242^3; COMP 212^3

Stages II & III
18 GEOL 231^3, 311^6, 331^3, 332^3, 415^3
12 Chosen from GEOL 232^3, 312^3, 313^3, 390^3, 411^6, 417^3, 421^3, 423^3
17 CHEM 231^2, 233^2, 290^3, 312^3, 332^2, 338^2, 341^3
5-6 Chosen from CHEM 221^3, 222^3, 339^2, 398^3 or 498^3

78 BSc Specialization in Resource Analysis and Land Use

Stage I
27 GEOL 210^3, 211^3, 212^3, 213^3, 216^3, 231^3; GEOG 211^6, 267^3

Stages II & III
15 GEOL 311^6, 331^3, 332^3, 415^3
12 Chosen from GEOL 232^3 and Geology 300- and 400-level courses
18 GEOG 317^3, 357^6, 372^6, 475^3
6 from either POLI 361^3, 363^3
or
*ECON 391^3, 396^3
**Requires prerequisites of ECON 201^3, ECON 203^3*

78 BSc Specialization in Geology-Ecology

Stage I
24 GEOL 210^3, 211^3, 212^3, 213^3; BIOL 230^3, 240^3, 250^3, 322^3

Stages II & III

24 GEOL 216^3, 224^3, 231^3, 311^6, 331^3, 332^3, 415^3

9 Chosen from GEOL 232^3 and Geology 300- and 400-level courses

18 BIOL 270^3, 344^3, 352^3, 355^3, 480^3

3 Chosen from BIOL 321^3 and 454^3

39 BSc Major in Geology

Stage I

18 GEOL 210^3, 211^3, 212^3, 213^3, 216^3, 231^3

Stages II & III

15 GEOL 311^6, 331^3, 332^3, 415^3

6 Chosen from GEOL 232^3 and Geology 300- and 400-level courses

24 Minor in Geology

12 GEOL 210^3, 211^3, 212^3, 213^3

12 GEOL elective credits

NOTE: GEOL 202^3, 203^3, 205^3, 206^3, 207^3, 208^3 cover topics of general interest in Earth Sciences and may be taken by students without a strong background in science.

Students without CEGEP Geology 901 or equivalent are required to take GEOL 210^3.

Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

Field Trips and Field Schools

Field trips, normally conducted on week-ends, are mandatory in some of the geology courses. In addition, two field schools (GEOL 216, GEOL 316) are conducted by the staff in the two weeks immediately following the Spring exams. Enrolment in field schools is normally restricted to students registered in programmes for which they are required courses. Other geology students with appropriate prerequisites will be accepted only if space is available in the courses.

Summer Employment

It is strongly recommended that, prior to graduation, at least one summer be spent in some phase of geological work. Although the Department of Geology cannot guarantee summer employment, its students can normally expect to work in geology with government agencies or private exploration companies during the summer months.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

GEOL 202 ***Oceanography*** (3 credits)

Geomorphology of the ocean floor, with emphasis on the significance of the mid-oceanic ridges and trench systems. The physical and chemical characteristics and circulation of ocean waters and their causes. Tides and waves. Distribution and origin of terrigenous, biogenous, chemogenic, volcanogenic, and polygenic sediments in the ocean basins. Conditions of oceanic sedimentation. Quantitative distribution of suspended sedimentary materials at the ocean bottom. Size composition of suspensions and bottom sediments. Economic resource potential of the oceans. Lectures only.

NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 203 ***Introduction to Environmental Geology*** (3 credits)

Prerequisite: None; GEOL 210 recommended. Geology in the ecosystem. The earth's atmosphere, hydrosphere, lithosphere, and biosphere in geologic time. Long-range geological effects of ecosphere pollution. Trace nutrients and health, with emphasis on the geology of trace-elements and their cause and effect on biological systems. Understanding of, control for, and prevention of natural hazards. Changes in the earth's climate. Role of Geology in land use. Lectures only.

NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 205 ***Non-Renewable Resources*** (3 credits)

Prerequisite: None; GEOL 210 recommended. Rocks and ore minerals. Present and future availability of earth resources. The nature, classification, and mode of occurrence of mineral deposits. Exploration, development, and rational exploitation of mineral resources. Elements of mining economics. Distribution of oil, gas, coal, and base-metal deposits. Evaluation of the effects of mining operations on environment. Lectures only.

NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 206 ***Earthquakes, Drifting Continents and Volcanoes*** (3 credits)

Prerequisite: None. The aim of the course is to provide an up-to-date account of our present knowledge of earthquakes and volcanoes and their global connections which are of general interest for students with little or no previous background in earth science. Areas of concentration are: nature, distribution and causes of earthquakes and volcanic eruptions, earthquake waves and their effects, measuring earthquakes, great earthquakes and volcanic eruptions in world history, products of volcanic eruptions, four billion years of volcanism on the Earth and elsewhere in the solar system. Prediction of earthquakes and volcanic eruptions and global connections between earthquakes, drifting continents and volcanoes. Lectures only.

NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 207 ***North America and the Great Ice Age*** (3 credits)

Prerequisite: None. The aim of the course is to present the major principles of geology upon which our knowledge of the ice age is based. Areas of concentration are: the development of the glacial theory, glaciers and glaciation, tracking ancient glaciers, glacial chronology in North America, two million years of cold spells and warm spells, earlier glaciations, causes of glacial climates, speculations for the future and

the effect of glacial loads on the earth's crust. Lectures only.
NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 208 ***The Earth, Moon and the Planets*** (3 credits)
Prerequisite: None. The course emphasizes the cosmic perspective of the Earth and focuses attention on how the results of the last two decades of planetary exploration have brought about an intellectual revolution concerning the planets, especially their surface features, processes and histories. Lectures only.
NOTE: Students in degree programmes in Geology may not take this course for Geology credits.

GEOL 210 ***Physical Geology*** (3 credits)
Prerequisite: None. An elementary study of minerals and rocks, and of the internal and external processes which shape the earth's surface. Laboratory work deals with identification of minerals, rocks, and fossils, as well as interpretation of topographic and geologic maps. Field trips to Mount Royal, Eastern Townships, and Laurentians. Lectures and laboratory.

GEOL 211 ***Mineralogy I*** (3 credits)
Prerequisite: None. Physical and chemical properties of minerals. Crystallography, crystal notation, stereographic projection. Crystal structures. Identification, description, and classification of minerals. One or two field trips near Montréal. Lectures and laboratory.

GEOL 212 ***Invertebrate Paleontology*** (3 credits)
Prerequisite: GEOL 210, or equivalent. A systematic survey of major invertebrate fossil groups, with chief emphasis on morphology, classification, and geologic occurrence. Study of principles of evolutionary concepts and zonation. Some selected discussion on paleoecology. Lectures and laboratory.

GEOL 213 ***Structural Geology I*** (3 credits)
Prerequisite: GEOL 210 or equivalent, previously or concurrently or permission of the Department. Major structural features of the Earth; principles of rock deformation; primary structures in igneous and sedimentary rocks and their significance. Classification and analysis of folds and fractures, study of secondary structures associated with folding. Laboratory deals with structural problems solved by orthographic and stereographic methods. Several field trips to selected outcrop areas, with reports. Lectures and laboratory.

GEOL 216 ***Field Methods*** (3 credits)
Prerequisite: GEOL 213; GEOL 231. Elements of surveying, construction of base maps. Geological field methods: description and recording of geological field data, construction of geological maps. Collection and presentation of field data in exploration geophysics and exploration geochemistry. One lecture per week in the Winter Session and two-week field school in the Spring, immediately after the final examinations.

GEOL 224 ***Introduction to Remote Sensing and Terrain Analysis*** (3 credits)
Prerequisite: GEOL 210 or GEOG 271. GEOL 213 recommended. An introduction to a variety of remote sensing techniques including aerial photography, airborne magnetometer surveys, aerial thermography, side-looking aerial radar and multispectral scanning imagery from satellites. Emphasis is placed on geological and geographical applications of terrain analysis. LANDSAT imagery, airphoto, stereopairs, and aeromagnetic maps are used in the laboratory for the analysis of a number of selected areas. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 215 may not take this course for credit.

GEOL 231 ***Physics of the Earth*** (3 credits)
Prerequisite: CEGEP Mathematics 103; 203; CEGEP Physics 301; GEOL 210 or equivalent. This course is directed toward the general understanding of physical phenomena of the solid earth. Subjects for consideration include the following: earth's origin, age, radioactivity, magnetism, gravity field, seismology, heat flow, structure and physical state of the earth's interior. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 221 may not take this course for credit.

GEOL 232 ***Introduction to Geochemistry*** (3 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 30l; CEGEP Mathematics 103; CEGEP Mathematics 203; GEOL 210. The course focuses on the application of concepts of elementary chemistry to geological problems. Subjects for consideration include: application of thermodynamics to geological problems, phase equilibria relationships in petrogenesis, partitioning of elements, crystal chemistry, distribution of elements, chemistry of natural waters including properties of water at high temperatures and pressures. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 223 may not take this course for credit.

GEOL 298 ***Selected Topics in Geology*** (3 credits)

GEOL 299 ***Selected Topics in Geology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

GEOL 309 ***Economic Geology Laboratory*** (1 credit)
Prerequisite: GEOL 332 taken concurrently. Ore reserve calculations; core logging; economic feasibility studies of mineral deposits.
NOTE: Students who have received credit for GEOL 412 may not take this course for credit.

GEOL 311 ***Introductory Petrology*** (6 credits)
Prerequisite: GEOL 211. The identification and description of hand specimens of igneous, sedimentary, and metamorphic rocks. Rock associations. Classification and origin of major rock groups. Lectures and laboratory.

GEOL 312 ***Mineralogy II*** (3 credits)
Prerequisite: GEOL 211. Point and translational symmetry, point groups, space groups, interpretation of space-group tables, elements of crystal chemistry, chemistry and phase relations of important rock-forming minerals. Stereographic projections of crystal data; the Universal Stage and powder diffractometry in identifying minerals are subjects stressed in laboratories. Lectures and laboratory.

GEOL 313 ***Optical Crystallography*** (3 credits)
Prerequisite: GEOL 211. Behaviour of light in crystals. The optical indicatrix. The polarizing microscope and optical properties of minerals. Identification of non-opaque minerals in oil immersion and thin sections. If time permits, use of the Universal Stage will be introduced. Lectures and laboratory.

GEOL 314 ***Stratigraphy*** (3 credits)
Prerequisite: GEOL 212; GEOL 311, previously or concurrently. Introduction to historical developments of stratigraphic concepts. Role of natural dynamic processes in the evolution of stratigraphic record. Discussion on stratigraphic classification and nomenclature. Major classification of tectonic elements in sedimentary basins, and broad patterns in the distribution of sedimentary rocks in relation to tectonic framework. Detailed analysis of stratigraphic principles, such as correlation (lithostratigraphic, biostratigraphic, chronostratigraphic), facies (lithofacies; biofacies), unconformities, and cyclothem. Critical evaluation of stratigraphic sequences using modern and ancient examples for the recognition of aeolian, alluvial fan, fluvial, lacustrine tidal flats, barrier coastlines, carbonate shoreline, shallow marine and submarine environments. Lectures and laboratory.

GEOL 316 ***Field Geology*** (3 credits)
Prerequisite: GEOL 216; GEOL 311, or permission of the Department. Two-week field work right after the final examination period. Working in groups, students map an area, prepare sections, and submit a geological map and/or written report. Group studies of important outcrops or outcrop areas and quarries. Transportation is provided by the Department but students must pay for board and lodging.
NOTE: Students taking this course in their final year may not be able to graduate in the Spring of the same year.

GEOL 318 ***Structural Geology II*** (3 credits)
Prerequisite: GEOL 213. Concepts of strain and mechanics of deformation. Description of tectonic fabrics and analysis of folds; identification and interpretation of polyphase deformation. Regional structural associations and their evaluation. Laboratory includes field oriented structural problems, drill holes and regional structural analysis. Use of aerial photographs in the preparation of geological maps and sections. Several field trips and structural mapping of selected outcrops or outcrop areas. Lectures and laboratory.

GEOL 322 ***Phanerozoic Geology of Canada*** (3 credits)
Prerequisite: GEOL 311; GEOL 331, (may be taken concurrently). A study of the geology of Cordilleran, Appalachian and Arctic provinces, platforms and continental shelves of Canada with emphasis on structure, stratigraphy, tectonic evolution and resources. Reading assignments and colloquium are used to probe into specific problems. Lectures and seminars.

GEOL 323 ***Precambrian Geology of Canada*** (3 credits)
Prerequisite: GEOL 311; GEOL 331, (may be taken concurrently). A study of the geology of the Canadian Shield with emphasis on problems of correlation, tectonic style and distribution of ore deposits. Lectures and seminars.

GEOL 324 ***Analytical Methods in Geochemistry*** (6 credits)
Prerequisite: CEGEP Chemistry 201; CEGEP Physics 301; CEGEP Mathematics 103; CEGEP Mathematics 203; or equivalent courses. Chemical equilibrium as applied to volumetric and gravimetric procedures; general theory of volumetric titrations; titration curves; application of general titration theory to neutralization precipitation; complexation oxidation- reduction and nonaqueous solvent titrations; theory of potentiometry and potentiometric titrations; theory of gravimetric analysis; methods of separation by chemical and physical means; electrogravimetry and electrolytic separations; absorptimetric theory and absorptimetric methods of analysis. Analyses of major and minor components of geological material. Lectures and laboratory.
NOTE: Students who have received credit for CHEM 211 may not take this course for credit.

GEOL 325 ***Geostatistics and Computer Applications in Geology*** (3 credits)
Prerequisite: GEOL 210, or equivalent. Statistical analysis and computing methods applied to geological problems. Lectures and laboratory.

GEOL 331 ***Historical Geology*** (3 credits)
Prerequisite: GEOL 212; GEOL 213; or permission of the Department. Fundamental concepts in Historical Geology; principles of stratigraphy, paleogeography and geochronology. A systematic review of the geological history of the Earth, and development of life forms from the Precambrian to Recent. Geological evolution of classical areas with special attention to the North American continent. Studies of stratigraphic sections and geological maps. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 310 may not take this course for credit.

GEOL 332 ***Economic Geology*** (3 credits)
Prerequisite: GEOL 311 previously or concurrently. The course deals with the genetic concepts leading to the formation of metallic and non-metallic mineral deposits, their classification, world distribution and economic evaluation. Concepts related to zonation, metallogenic provinces, metallotects, and exploration and evaluation of mineral deposits are also dealt with. Laboratory includes examination and study of selected ore-suites from the most important mining camps, ore reserve calculations, core logging and economic feasibility studies of classical mineral deposits. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 317 may not take this course for credit.

GEOL 390 ***Petrology*** (3 credits)
Prerequisite: GEOL 311; GEOL 313. Microscopic study of thin sections of common igneous, metamorphic and sedimentary rocks. Selected topics in petrogenesis. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 411 may not take this course for credit.

GEOL 398 ***Selected Topics in Geology*** (3 credits)

GEOL 399 ***Selected Topics in Geology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

GEOL 411 ***Igneous and Metamorphic Petrology*** (6 credits)
Prerequisite: GEOL 311; GEOL 313. Interpretation of phase diagrams. Mineralogy, fabric, and petrogenesis of igneous and metamorphic rocks. Magmatic and metamorphic processes. ACF and AKF diagrams for various metamorphic facies. Study of selected problems. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 390 may claim only three credits for this course.

GEOL 413 ***Sedimentary Petrology*** (3 credits)
Prerequisite: GEOL 311; GEOL 313. General principles of sediment diagenesis, followed by detailed analysis of the diagenetic evolution of sandstone, shale, and carbonate rocks. Emphasis is placed heavily on the microscopic criteria in the recognition of diagenetic fabric. Problems of primary sedimentary structures and their hydro-dynamic interpretation are also discussed. Specialized topics on current development in sedimentary lithogenesis are also included. Lectures and laboratory.

GEOL 414 ***Undergraduate Research*** (6 credits)
Prerequisite: For Third-Year Honours students. Honours students in their final year are expected to show competence in isolating and examining a geological problem under the supervision of a faculty adviser. A written application to take the course, including a brief outline of the research project, must be made to the Department before April 15 of the second year. The application is reviewed by a committee and a decision forwarded by mail. The results of research must be presented in the form of an undergraduate thesis, two copies of which must be submitted by April 1.
NOTE: Written requests from Specialization students, with appropriate academic records, to take the course will be considered.

GEOL 415 ***Plate Tectonics and Crustal Evolution*** (3 credits)
Prerequisite: GEOL 213; GEOL 231; GEOL 311. Techniques of data collection in tectonics. Structure and rheology of the upper mantle. Tectonics of crustal types to include shields, platforms, passive continental margins, Phanerozoic foldbelts, continental rifts, island-arc trench belts and oceanic rises. Sea-floor spreading, plate tectonics, magma associations and plate reconstructions. Crustal origin and growth. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 315 may not take this course for credit.

GEOL 417 ***Mineral Deposits*** (3 credits)
Prerequisite: GEOL 332; GEOL 390 or GEOL 411 previously or concurrently. The course deals with the study of ore deposits generated by magmatic segregation, contact metasomatic, hydrothermal, volcanogenic, sedimentary and supergene enrichment processes. Concepts of geothermometry, geobarometry and stable isotopes are also dealt with. Examples of particular geological interest from the most representative mining districts of the world. Laboratory includes petrological examination of metallic suites, fluid inclusion and Vickers microhardness tests. Lectures and laboratory.
NOTE: Students who have received credit for GEOL 416 may not take this course for credit.

GEOL 421 ***Exploration Geochemistry*** (3 credits)
Prerequisite: GEOL 311, or permission of the Department. Basic principles; primary and secondary dispersion processes and their significance in geochemical exploration; field and analytical techniques (one field excursion early in the fall term); interpretation of geochemical data; organization of exploration programmes; selected case histories. Lectures and laboratory.

GEOL 422 ***Exploration Geophysics*** (3 credits)
Prerequisite: GEOL 231, or permission of the Department. A brief study of the principles of magnetic, gravimetric, electric, and seismic methods of mineral exploration; interpretation of geophysical data; organization of exploration programmes; selected case histories. Lectures and laboratory.

GEOL 423 ***Introduction to X-ray Crystallography*** (3 credits)
Prerequisite: GEOL 312. The nature of X-rays, diffraction, the reciprocal lattice, powder diffractometer, powder cameras, single-crystal methods. Laboratory work stresses the techniques of powder diffractometry and precession photography. Lectures and laboratory.

GEOL 424 ***Engineering Geology*** (3 credits)
Prerequisite: GEOL 210; or equivalent (GEOL 213 and GEOL 224 are recommended). Engineering properties of rocks and soils. Landslides, groundwater, frost action, and permanently frozen ground. Application of geology to engineering problems—concrete petrology, tunnels, slope control, foundations, roads, airports, dams, and reservoirs. One term paper to be prepared. The laboratory period includes field trips, engineering geology case histories, and feasibility study of engineering geology problems. Lectures and laboratory.

GEOL 425 ***Fossil Fuels*** (3 credits)
Prerequisite: GEOL 314; GEOL 415, previously or concurrently or permission of the Department. Origin and accumulation of petroleum hydrocarbons and coal. Distribution of oil, natural gas, and coal deposits as a function of geological environments. Geology of major oil and coal fields of the world. Global energy requirements and production forecasts. Lectures and laboratory.

GEOL 498 ***Advanced Topics in Geology*** (3 credits)

GEOL 499 ***Advanced Topics in Geology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.160 History

Chair
M. GRAEME DECARIE, *Associate Professor*

Professor Emeritus
GEORGE RUDE

Professors
ALAN H. ADAMSON
FREDERICK BODE
RICHARD J. DIUBALDO
DONALD GINTER
WILLIAM H. HUBBARD
JOHN F. LAFFEY
J. CAMERON NISH
LIONEL ROTHKRUG
ROBERT TITTLER

Adjunct Professor of History
EDWARD E. McCULLOUGH

Associate Professors
F. GEOFFREY ADAMS
CHARLES L. BERTRAND
FRANK R. CHALK
JOHN L. HILL
FREDERICK H. KRANTZ
MICHAEL MASON
RONALD RUDIN
STEPHEN J. SCHEINBERG
FRANZISKA E. SHLOSSER
MARTIN SINGER
IRVING H. SMITH
WALTER VAN NUS
MARY VIPOND

Adjunct Associate Professor
ROBERT T. COOLIDGE

Assistant Professors
GRAHAM CARR
STEPHEN DAVIES
ROSEMARIE SCHADE

Canada Research Fellows
CAROLYN FICK
PETER KEATING

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Honours in History

The following courses in an approved sequence constitute Honours in History. Students intending to enter the Honours programme are advised to consult with the Department.

6 HIST 201^3, 202^3 *(European)*
6 HIST 203^3, 205^3 *(Canadian)*
6 HIST 200 level *(Non-Western) or* HIST 251^3, 253^3 *(American)*
6 HIST 200- or 300-level courses (6 credits or 3 credits)
6 HIST 397^6 *(required Honours Seminar)*
12 HIST 300-level courses (6 credits or 3 credits)
6 HIST 493^6 *(Honours Essay Tutorial)*
12 HIST 400-level courses (6 credits) *or* related course(s) in another Department *with History Department approval.*

60 BA Specialization in History

6 HIST 201^3, 202^3 *(European)*
6 HIST 203^3, 205^3 *(Canadian)*
6 HIST 200 level *(Non-Western) or* HIST 251^3, 253^3 *(American)*
6 HIST 200-level courses (6 credits or 3 credits)
24 HIST 300-level courses (6 credits or 3 credits)
12 HIST 300- (6 credits or 3 credits) or 400-level courses (6 credits) *or* related course(s) in another Department *with History Department approval.*

60 BA Joint Specialization in English and History

6 Genre, critical reading and survey courses from ENGL 256^6, 257^3, 258^3, 271^3, 275^3, 277^3, 280^3, 281^6, 282^6, 283^6, 284^6 (to be taken in the first 24 credits in the programme)
6 Periods before 1800 (British and European) from ENGL 310^6; ENGL 315^6 through ENGL 318^6; from ENGL 320^6 through ENGL 335^3
6 North American (Canadian and American) from ENGL 290^6, 293^3, 300^3, 301^3, 311^6, 365^3, 367^3, 369^3, 370^6, 371^3, 372^3, 375^6, 379^3
6 19th Century and 20th Century (British and European) from ENGL 305^6, 306^6, 307^3, 308^3, 338^6, 339^3, 340^3, 342^6, 343^3, 344^3, 348^6, 352^3, 353^3, 355^3, 356^6, 357^3, 358^3, 359^3, 366^3, 390^6, 392^6, 459^6
6 ENGL elective credits from ENGL 224 to ENGL 499
18 HIST credits chosen from two different historical periods to parallel English courses to be chosen in consultation with the departments
12 HIST elective credits

42 BA Major in History

6 HIST 201^3, 202^3 *(European)*
6 HIST 203^3, 205^3 *(Canadian)*
6 HIST 200 level *(Non-Western) or* HIST 251^3, 253^3 *(American)*
18 Chosen from any HIST 300-level courses (6 credits or 3 credits)
6 Chosen from any HIST 300- (6 credits or 3 credits) or 400-level courses (6 credits)

24 Minor in History

12 HIST 200-level *(Field Surveys)*, HIST 201[3], 202[3] *(European)* or HIST 203[3], 205[3] *(Canadian) or (Non-Western) or* HIST 251[3], 253[3] *(American)*

6 HIST 200-level courses (6 credits or 3 credits)

6 HIST 300-level courses (6 credits or 3 credits)

30 Minor or Certificate in the History of Québec

This programme is designed to prepare teachers at both the Secondary and CEGEP levels to offer courses in the History of Québec. It also provides an outline of study for those who are generally interested in the topic of Québec History.

3 HIST 209[3]

3 HIST 210[3]

12 Chosen from HIST 307[3], 308[3], 313[3], 314[3] or from HIST 398[3], 399[6] (when the Department determines such courses to have adequate Québec content)

6 Chosen from HIST 411[6], 498[3], or 499[6] (when the Department determines such courses to have adequate Québec content)

6 Chosen from courses on Québec or French Canada offered by the Departments of Economics, Études françaises, Geography, Political Science or Sociology, or related courses approved by the Department.

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

N.B.:

(1) 300-level courses are generally open only to students who have successfully completed at least 12 credits of 200-level History courses (normally 201-202, European, and 203-205, Canadian). Aside from designated cross-listed offerings, qualified non-History students may be admitted to 300-level courses with the permission of the Department.

(2) 400-level seminars normally open to honours students or students of high academic standing or permission of the Department.

HIST 201 ***Introduction to European History to 1789*** (3 credits)
A survey of the history of Europe to the French Revolution, with emphasis on the development of ideas and political institutions.

HIST 202 ***Introduction to European History, from 1789 to the Present*** (3 credits)
A survey of the history of Europe from the French Revolution to the present, with emphasis on the development of ideas and political institutions.

HIST 203 ***History of Canada, Pre-Confederation*** (3 credits)
A survey of Canadian history, from settlement to Confederation, emphasizing readings and discussions on selected problems.

HIST 205 ***History of Canada, Post-Confederation*** (3 credits)
A survey of Canadian history from Confederation to the present, emphasizing readings and discussions on selected problems.

HIST 206 ***Introduction to the Non-Western World I*** (3 credits)
By giving an account of the worlds of Asia, Africa and the Americas between c. 1400 and c. 1900 we seek to show the interplay between local and international historical developments in the making of the global economy. In this course we study both the largely autonomous developments of such centres of civilization as China and the Ottoman Empire and the effects on the non-Western world of European expansion. The course ends with a discussion of the Age of Empire.

HIST 207 ***Introduction to the Non-Western World II*** (3 credits)
Continuing from HIST 206 (which is not a necessary prerequisite) this course is concerned with the period from the late nineteenth century up to the period of the "Third World" in the 1960s. It principally focusses on the objects and effects of colonialism, anti-colonial struggles, the emergence of the non-aligned bloc and Western interventionism.

HIST 209 ***Québec to 1867*** (3 credits)
An introductory survey of the history of Québec from its origins as a colony to the creation of modern Canada by the British North American Act of 1867. Particular emphasis is placed on a consideration of those elements of Québec's past which best assist in the comprehension of the trends prevalent in modern Québec.

HIST 210 ***Québec since Confederation*** (3 credits)
A survey of the history of Québec from the time of Confederation until the present. While due emphasis is placed on political developments in the Province, the purpose of the course is to acquaint the student with the significant economic and social trends in modern Québec.

HIST 211 ***Canadian Business History*** (3 credits)
This course looks at the forces influencing the history of Canadian business from the French régime to the present. The nature of business organization, the sources of capital and the relationship between government and business are among the factors to be considered.
NOTE: Students who have received credit for HIST 316 may not take this course for credit.

HIST 215 ***History of Recreation and Leisure in Canada*** (3 credits)
A survey of the history of recreation and leisure from the time of European contact with native peoples to the present day. It is placed in the context of Canadian history to examine such phenomena as European and American influences on Canada, effects of urbanization, the roles of women in society, and the commercialization of leisure. Recreation and leisure are understood to include not only sports and games but such activities as rural bees, education, drinking, gambling, and celebrations. The course also provides an introduction to the historical literature on recreation and leisure, and to the discipline of History.

HIST 219 ***(also given as CLAS 230) Ancient Near East*** (3 credits)
A survey of the political, social, economic, and intellectual history of the Ancient Near East, from the Neolithic age to the Indo-European invasions of the early 2nd Millennium, with special emphasis placed upon the problem of the emergence of civilization in Mesopotamia, Egypt, and the Indus valley. Ancient sources utilized wherever possible.

HIST 223 ***(also given as CLAS 240) Introduction to Greek History*** (3 credits)
A political, social, economic, and cultural history of Greece from Minoan — Mycenaean times to the end of Classical Greek civilization in the fourth century B.C., with special emphasis placed upon fifth-century Athens.

HIST 225 ***(also given as CLAS 242) History of Rome*** (3 credits)
A study of the various aspects of the history of Rome from the city's origins to the establishment of the Roman Empire under the Emperor Augustus. The main theme of this course is the growth of the city of Rome from an early settlement on the Tiber River to mistress of the Mediterranean world. The ideologies and institutions of Republican Rome are analyzed in detail, and a study is made of the transitionary period that later on came to form the basis of the Roman Empire. The timespan with which this course is concerning itself is from 753 B.C. to 27 B.C.

HIST 251 ***History of the United States to 1877*** (3 credits)
Survey of American history from settlement to 1877. The course deals with the political and economic framework of American history, and with social and cultural trends.

HIST 253 ***History of the United States since 1877*** (3 credits)
Survey of American history from 1877 to the present. The course deals with the political and economic framework of American history, and with social and cultural trends.

HIST 261 ***History of India*** (3 credits)
An introduction to the intellectual traditions, social structures, and political institutions of South Asia, with particular attention to developments during the past two centuries.

HIST 262 ***History of China*** (3 credits)
A survey of China's history from earliest times to the modern era.

HIST 263 ***History of Japan*** (3 credits)
A survey of Japan's history from earliest times to the modern era.

HIST 264 ***History of Africa*** (3 credits)
An introductory survey of African history from the fifteenth century to the present. Particular emphasis is placed on pre-colonial Africa and the impact of colonialism on its political and economic patterns.
NOTE: Students who have received credit for HIST 270, or 271, or 272, or 278, or 279 may not take this course for credit.

HIST 281 ***History of the Cold War*** (3 credits)
This course examines the early signs of friction between the Great Powers during World War II and the diplomatic breakdown of relations after the common triumph over the Axis Powers. The course also examines the two different world views projected by the Super Powers and the long chain of events which led to near disaster in the Cuban Missile Crisis.

HIST 282 ***Arms Race and Arms Control*** (3 credits)
A survey of the nuclear arms race since the 1930s. This course places special emphasis on furnishing students with the knowledge to participate intelligently in contemporary nuclear debates. (This course has previously been offered as a 300-level slot course.)

HIST 283 ***World History*** (6 credits)
A survey for non-majors in History, designed principally for students in other departments and faculties, emphasizing basic concepts, comparative study, and awareness of global patterns of historical development. Development of writing and research skills is stressed in conference.

HIST 298 ***Selected Topics in History*** (3 credits)

HIST 299 ***Selected Topics in History*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

HIST 300 ***British North America to the 1840s*** (3 credits)
Prerequisite: See N.B. number (1). An advanced study of British North America focusing on the social, economic, political and cultural development of the colonies.

HIST 301 ***Canada from the 1840s to the 1890s*** (3 credits)
Prerequisite: See N.B. number (1). An advanced study of Canada in the period of its modernization. A blend of social, economic, political and cultural approaches is taken.

HIST 307 ***History of Montréal*** (3 credits)
Prerequisite: See N.B. number (1). A study of the origins of the city, its role in the Empire of the St. Lawrence, and its rise to metropolitan dominance in Canada. Special emphasis on economic development and on ethnic groupings.

HIST 308 ***History of English-Speaking Québec*** (3 credits)
Prerequisite: See N.B. number (1). An analysis of the experience of the different groups which have made up this community, from the Conquest to the present.

HIST 309 ***History of the Canadian North*** (3 credits)
Prerequisite: See N.B. number (1). An intensive study of the advance of the northern frontier of Canada, with emphasis on the period 1840-1945. The course stresses exploration, problems of sovereignty, conflict of cultures, and economic development.

HIST 310 ***Canada in the Early Twentieth Century, 1896-1929*** (3 credits)
Prerequisite: See N.B. number (1). An intensive study of early twentieth-century Canada concentrating on selected themes in economic, political, social and cultural history.
NOTE: Students who have received credit for HIST 312 may not take this course for credit.

HIST 311 ***Contemporary Canada, 1930s to the Present*** (3 credits)
Prerequisite: See N.B. number (1). An intensive study of Canada since the 1930s concentrating on selected themes in economic, political, social and cultural history.
NOTE: Students who have received credit for HIST 312 may not take this course for credit.

HIST 313 ***Québec in the Nineteenth Century*** (3 credits)
Prerequisite: See N.B. number (1). This course explores the major social, economic and political issues that arose during the 1800s in the transformation of Québec from a pre-industrial to an industrial society.
NOTE: Students who have received credit for HIST 315 may not take this course for credit.

HIST 314 ***Québec in the Twentieth Century*** (3 credits)
Prerequisite: See N.B. number (1). This course explores the major social, economic and political issues of twentieth-century Québec in the light of the concentration of economic power into relatively few hands early in the century and the declining importance of industrial production since World War II.
NOTE: Students who have received credit for HIST 315 may not take this course for credit.

HIST 317 ***Canada Views the United States*** (3 credits)
Prerequisite: See N.B. number (1). An examination of Canadian attitudes to the United States from 1776 to the present, with respect to both specific incidents and general trends. Emphasis is placed on the discussion of primary source material.

HIST 319 ***Literary History of Twentieth-Century Canada*** (3 credits)
Prerequisite: See N.B. number (1). An examination of some of the major themes of Canadian history in the twentieth century as seen by Canadian novelists, English and French. Themes studied include the struggle for survival; regional, ethnic, and religious plurality; and the response to urbanization and industrialization.

HIST 320 ***United States, 1890-1932: The Rise of Modern American Society*** (3 credits)
Prerequisite: See N.B. number (1). This course offers an intensive examination of American history in this period beginning with the decline of the farmers' movement and ending with the arrival of the economic crisis of the 1930's. Industrialization, the development of the corporation, trade unionism, immigration, and racial conflict are some of the major themes discussed.
NOTE: Students who have received credit for HIST 354 may not take this course for credit.

HIST 321 ***Contemporary America, 1932 to the Present*** (3 credits)
Prerequisite: See N.B. number (1). The immediate historical background of today's America is the subject matter of this course. Major themes include: feminism, civil rights, and the rise and fall of the New Deal political coalition.
NOTE: Students who have received credit for HIST 354 may not take this course for credit.

HIST 322 ***History of Medieval Europe*** (6 credits)
Prerequisite: See N.B. number (1). A study of European society from the fall of Rome to the end of the fourteenth century. The Medieval era is examined in terms of its typical institutions: the Holy Roman Empire; the Papacy; Feudalism; guilds and towns. Developments and changes leading to the formation of modern society are analyzed.

HIST 323 ***(also given as CLAS 341) Greek History from Alexander to the Roman Conquest*** (3 credits)
Prerequisite: See N.B. number (1). A political, social, economic, and cultural history of the Greek World from Alexander the Great to the Roman conquest of Greece in 146 B.C.
NOTE: Students who have received credit for CLAS 241/HIST 224 may not take this course for credit.

HIST 324 ***History of Byzantium, 602-1453*** (6 credits)
Prerequisite: See N.B. number (1). A survey of the transformation from the Late Roman Empire into the Byzantine commonwealth, and changes in economic and social conditions. Special attention is given to the reorganization of administrative and military structures, the relationship between Byzantium and its Balkan neighbours, the Arab conquest, and the rising importance of Asia Minor.

HIST 325 ***Renaissance Europe*** (3 credits)
Prerequisite: See N.B. number (1). This course explores the transition from later Medieval to Renaissance Europe. Special attention is given to the nature, development and influence of the Italian Renaissance. Attention is also given to social and political issues in early modern Europe.

HIST 326 ***Reformation and Counter-Reformation in Early Modern Europe*** (3 credits)
Prerequisite: See N.B. number (1). An examination of the European Reformation and Counter--Reformation. Beginning with the late medieval context, the course stresses the significance of the period for the development of Western thought and society.

HIST 327 ***(also given as CLAS 343) History of the Roman Empire*** (3 credits)
Prerequisite: See N.B. number (1). A political, social, economic and cultural history of the Roman Empire from Augustus to the end of the Roman Empire in the West.
NOTE: Students who have received credit for CLAS 243/HIST 226 may not take this course for credit.

HIST 328 ***Social and Intellectual History of Early Modern Europe*** (6 credits)
Prerequisite: See N.B. number (1). A study of change and continuity in European society and culture, 1300-1650. Problems studied include feudal-capitalist relationships, the Italian Renaissance, Northern State Development, Protestant Reformation, Scientific Revolution, and European Colonial expansion. Methodological issues are emphasized.

HIST 329 ***Women in Western History, I*** (3 credits)
Prerequisite: See N.B. number (1). A survey of the position and roles of women in Western history from antiquity to the French Revolution. Themes analyzed in the lectures and in discussions include: Women's position in early law; the concept of courtly love; women in the French Revolution; the working woman in pre-industrial Europe.

HIST 331 ***Women in Western History, II*** (3 credits)
Prerequisite: See N.B. number (1). A survey as above but covering the period from after the French Revolution to modern times. Themes analyzed in the lecture and in discussions include: Women in post-industrial Europe; the Suffrage Movement; the Feminist Movement in Europe and North America; women during the two World Wars; women in the modern work-force.

HIST 332 ***Social History of Costumes and Interiors I*** (3 credits)
Prerequisite: See N.B. number (1). A social history of European civilization as reflected by fashions in dress and interiors. Dress especially mirrors accurately a society's ideals in esthetics and morals; interiors indicate lifestyles and social habits. Both costumes and interiors are treated in this course as an illustration of social history underscoring social change as from era to era. The course covers a time-span from the Middle Ages to the Renaissance, including a brief introduction to the classical period.

HIST 333 ***Social History of Costumes and Interiors II*** (3 credits)
Prerequisite: See N.B. number (1). Based on the same principles as HIST 332, this course covers a time-span from the Reformation to the Victorian Age.

HIST 334 ***Social and Intellectual History of Modern Europe*** (6 credits)
Prerequisite: See N.B. number (1). The intellectual systems arising in Europe since the seventeenth century are explored in the context of the economic and social circumstances which engendered them. This course begins with the rise of theories of "possessive individualism", and ends with the contemporary cultural crisis. While attention is paid to the general dynamics of culture, special attention is devoted to the social functions of particular ideologies.

HIST 342 ***History of England Since 1460*** (6 credits)
Prerequisite: See N.B. number (1). A survey of the political, economic and social development of England from the fifteenth to the twentieth century. Emphasis is placed on the evolution of governing institutions in the early period, on the economic and political changes of the eighteenth and nineteenth centuries, and on the growth of the social-service state.

HIST 343 ***Social and Economic History of Britain, 1500-1900*** (6 credits)
Prerequisite: See N.B. number (1). A study of the transition from a feudal to a modern industrial society. Attention is given to the leading features of industrial, agricultural, commercial, and financial change and their impact on the structure of society.

HIST 344 ***Tudor England*** (3 credits)
Prerequisite: See N.B. number (1). A detailed examination of the political, social and economic aspects of England in the Tudor age, 1485-1603. Particular attention is paid to "The New Monarchy", the Henrician Reformation and its consequences, the "Mid-Tudor Crisis", tensions between local and national interests, Elizabethan government, economic change, Puritanism and Catholicism, and the problem of order.

HIST 345 ***Modern Germany in the Nineteenth and Twentieth Centuries*** (6 credits)
Prerequisite: See N.B. number (1). A study of the ideological and socioeconomic development of Germany from the break-up of the Holy Roman Empire to the present.

HIST 346 ***Modern Austria From Empire to Republic*** (3 credits)
Prerequisite: See N.B. number (1). A study of German-speaking Austria from the establishment of the Austrian Empire in 1804 to the present. Cultural trends are considered in addition to socioeconomic and political developments.

HIST 348 ***History of Ireland*** (3 credits)
Prerequisite: See N.B. number (1). A survey course that traces the history of Ireland from 432 A.D. to the present. Emphasis is on the nineteenth and twentieth centuries. Special attention is given to the development of Irish nationalism and relations with Great Britain. Irish music and literature is used to supplement the historical perspective.

HIST 353 ***United States to the 1740s*** (3 credits)
Prerequisite: See N.B. number (1). This course examines the earliest period of American history. It gives special emphasis to the nature of Amerindian society, white-Amerindian contact, and the varieties of colonial settlement patterns.

HIST 354 ***United States from the 1740s to 1815*** (3 credits)
Prerequisite: See N.B. number (1). This course examines themes and issues in the revolutionary and early national periods of American history.

HIST 355 ***United States in the Nineteenth Century, 1815-1850*** (3 credits)
Prerequisite: See N.B. number (1). A study of American political, social, and economic life from the end of the War of 1812 to the intensification of sectionalism about 1850. Topics include geographic expansion and the beginnings of industrialization, the characteristics of southern slave society, and the rise of a system of political parties during the age of Jackson.

HIST 356 ***United States in the Nineteenth Century: The Era of the Civil War*** (3 credits)
Prerequisite: See N.B. number (1). A study of American political, social, and economic life before and after the Civil War, from about 1850 to 1890. Topics include sectionalism and the breakdown of parties during the 1850s, the tasks of Reconstruction after the war, the New South, and the problems of a maturing industrial society.

HIST 357 ***Foreign Relations of the United States to 1917*** (3 credits)
Prerequisite: See N.B. number (1). An analysis of United States foreign policy from the American Revolution to United States entry into World War I, emphasizing the domestic debate over foreign policy and economic development, commercial and territorial expansion, and the dynamics of Canadian-American relations.

HIST 358 ***Foreign Relations of the United States, 1917 to the Present*** (3 credits)
Prerequisite: See N.B. number (1). An historical investigation of United States foreign policy from American intervention in the Russian Revolution to the present, emphasizing United States responses to the challenge of revolutions in Asia and Africa. American conceptions of a new world order, the rise of the multinational corporation and its impact on Canadian-American relations.

HIST 359 ***Social and Economic History of the United States*** (6 credits)
Prerequisite: See N.B. number (1). A survey of the relationship between economic and social change in the United States from the colonial period to the mid-twentieth century. Particular attention is given to the transition from an agricultural and mercantile society in the early nineteenth century to an urban-industrial society in the early twentieth-century.

HIST 361 ***Africa in the Nineteenth Century*** (3 credits)
Prerequisite: See N.B. number (1). The central focus of this course is the European assault on Africa and the unfolding of colonial economy and society. Some emphasis is placed on resistance to colonialism and the origins of nationalism.
NOTE: Students who have received credit for HIST 270, or 271, or 272, or 278, or 279 may not take this course for credit.

HIST 362 ***Traditional China*** (3 credits)
Prerequisite: See N.B. number (1). An examination of Chinese history from the beginning to the Ch'ing dynasty (c. 1800). Emphasis is placed on China's political, intellectual, and cultural heritage.

HIST 363 ***Africa in the Twentieth Century*** (3 credits)
Prerequisite: See N.B. number (1). This course deals with questions of nationalism and of the economic and social development of colonial and post-colonial Africa. There is particular focus on liberation and revolutionary movements.
NOTE: Students who have received credit for HIST 270, or 271, or 272, or 278, or 279 may not take this course for credit.

HIST 364 ***Imperialism and Nationalism: India*** (3 credits)
Prerequisite: See N.B. number (1). British conquest established nearly two centuries of colonial rule over the world's oldest civilization. This course examines the nature of imperial control, the resistance of traditional leaders, European intellectual imperialism, Indian cultural and religious revivalism and modern nationalism. Special attention is paid to M.K. Gandhi and Gandhism as well as to Muslim separatism and the Pakistan movement.

HIST 365 ***Capitalism and Communism in South Asia*** (3 credits)
Prerequisite: See N.B. number (1). British India was a vital part of a great commercial and industrial empire at the highest stage of capitalism. This course explores the economic and social impact of this period on Indian society up to the present. Imperial capitalism, the Indian entrepreneurial elites, peasants and famine, industrialization, the effects of two world wars, and the communist challenge since independence are investigated.

HIST 366 ***Nineteenth Century China*** (3 credits)
Prerequisite: See N.B. number (1). An intensive study of Chinese history between 1800 and the beginnings of the Chinese revolution with emphasis on problems in political, social and intellectual history.

HIST 367 ***Twentieth Century China*** (3 credits)
Prerequisite: See N.B. number (1). An intensive study of Chinese history since 1900 with emphasis on problems in political, social and intellectual history.

HIST 368 ***(also given as SOCI 368) History and Sociology of Genocide*** (6 credits)
Prerequisite: See N.B. number (1). Through the comparative and historical examination of a number of cases, this course investigates the meaning of genocide and the processes that have led to it.

HIST 369 ***English Urban Community: From Feudalism to Industrialism, 1300-1700*** (3 credits)
Prerequisite: See N.B. number (1). Topics include: the elements of urban geography; emergence of the town from the countryside; the late Medieval urban crisis; the impact of the Reformation on English towns; urban demographic patterns; commercial and industrial structures; new towns; civic planning and building; social control in the urban community; the emergence of an urban cultural identity. Familiarity with English History, English Literature, Pre-Industrial European History or Urban History is helpful but not essential.

HIST 371 ***History of Latin America: The Colonial Period*** (3 credits)
Prerequisite: See N.B. number (1). A survey of Latin America up to the wars of independence from Spain. The main themes examined are: precolombian cultures; the Spanish conquest; patterns of colonial trade and economy; the role of the church; the Bourbon reforms.
NOTE: Students who have received credit for HIST 276 may not take this course for credit.

HIST 373 ***Africa and the Colonial Caribbean from Discovery to Slave Emancipation*** (3 credits)
Prerequisite: See N.B. number (1). The origins and development of West Indian settlement, the slave trade, and the plantation system are studied with a view to understanding simultaneously the exceptional social and economic structures which have defined West Indian history, the role of these structures in the development of European mercantilism and the effects of mercantilism on Africa. This course covers the period from the European discovery of the new world in the late fifteenth century to the abolition of slavery in the mid-nineteenth century and is complemented by HIST 360, The West Indies in the Nineteenth and Twentieth Centuries.

HIST 374 ***History of Latin America: The Modern Period*** (3 credits)
Prerequisite: See N.B. number (1). A survey of Latin American society in the nineteenth and twentieth centuries. The principal topics covered are: the social and economic roots of political instability; Mexico under Diaz; the Mexican revolution; Argentina and Brazil under Peron and Vargas; U.S. Latin American relations; Castro's Cuba; revolution and counter-revolution in contemporary Latin America.
NOTE: Students who have received credit for HIST 277 may not take this course for credit.

HIST 377 ***History of Russia*** (3 credits)
Prerequisite: See N.B. number (1). This course traces the origins of the medieval Russian state from the ninth century to the emergence of the Russian Empire. Emphasis is placed on political, social and economic problems of the eighteenth and nineteenth centuries. Particular attention is devoted to the Revolutions of 1905 and 1917.

HIST 378 ***History of the Soviet Union*** (3 credits)
Prerequisite: See N.B. number (1). This course examines the ideological roots of the Bolshevik Revolution, and traces the main economic, social and political developments of the Soviet Union. In addition, an analysis of Soviet foreign policy is presented from 1917 to the present.

HIST 381 ***Age of Absolutism 1640-1715*** (3 credits)
Prerequisite: See N.B. number (1). An examination of major developments in European society from the crisis of the mid-seventeenth century to the end of the War of the Spanish Succession; the emergence of the modern state and of the European state system is emphasized.

HIST 382 ***Age of Enlightenment 1715-1789*** (3 credits)
Prerequisite: See N.B. number (1). An examination of major developments in European society from the death of Louis XIV to the French Revolution. Special attention is given to social and intellectual movements, more particularly to the rise of the bourgeoisie and to the key ideas of the Enlightenment.

HIST 383 ***Age of Revolution 1789-1848*** (3 credits)
Prerequisite: See N.B. number (1). A study of the dual revolution — industrial and political — in England and France, and its initial consequences throughout Europe.

HIST 384 ***Age of Industrialization and Nationalism 1848-1914*** (3 credits)
Prerequisite: See N.B. number (1). A study of the transformation of European society, economy, and politics in the years between the upheavals of the mid-nineteenth century and the collapse of the traditional order in World War I.

HIST 385 ***Age of Dictators: Europe, 1914-1945*** (3 credits)
Prerequisite: See N.B. number (1). A study of the internal development and external relations of the nations of Europe from the Great War to the end of World War II. The course examines this chaotic age primarily through an investigation of the revolutionary and reactionary upheavals that kept Europe socially, politically and economically unbalanced for thirty years.

HIST 386 ***Contemporary Europe: 1945 to the Present*** (3 credits)
Prerequisite: See N.B. number (1). A study of the internal development and external relations of the nations of Europe from the collapse of Nazi Germany to the present. The course concentrates on the divisions between East and West, the economic recovery of Europe and the effects of the energy crisis on social, economic and political life throughout Europe.

HIST 387 ***Hanoverian England*** (6 credits)
Prerequisite: See N.B. number (1). A study of English social, political and cultural history in the crucial period 1714-1837, from the end of the English Revolution to the accession of Queen Victoria.
NOTE: Students who have received credit for HIST 347 may not take this course for credit.

HIST 388 ***History of Modern Italy: 1848 to 1922*** (3 credits)
Prerequisite: See N.B. number (1). A survey of the crucial developments in Italian history from the Risorgimento to the rise of fascism. The course emphasizes the problems surrounding the creation of a united Italy. Specifically, the course examines the issues raised by nationalism, liberalism, Catholicism and industrialization.

HIST 389 ***History of Modern Italy: 1922 to the Present*** (3 credits)
Prerequisite: See N.B. number (1). A survey of the crucial developments in Italian history from Mussolini's seizure of power to the present. The course examines the role and legacy of fascism, the creation of the republic, the economic miracle, the political and social turmoil and the rise of terrorism.

HIST 390 ***France 1789-1871*** (3 credits)
Prerequisite: See N.B. number (1). A review of the central developments in French history from the Revolution to the Paris commune. Special attention is given to social and intellectual history. Novels such as Stendhal's *The Red and the Black* and Flaubert's *Sentimental Education* are used as background reading.
NOTE: Students who have received credit for HIST 344 may not take this course for credit.

HIST 392 ***France 1871 to the Present*** (3 credits)
Prerequisite: See N.B. number (1). A review of French history from the Paris commune to the Fifth Republic. Special attention is given to social and intellectual history. Novels such as Zola's *Germinal* and Camus's *The Plague* are used as background reading.
NOTE: Students who have received credit for HIST 344 may not take this course for credit.

HIST 393 ***Vietnam War*** (3 credits)
Prerequisite: See N.B. number (1). The protracted Vietnamese conflict in both its French (1940-54) and American (1955-75) phases is analyzed using lectures, audio-visual materials, documents and soldiers' accounts. Vietnam's historical evolution and colonial experience are briefly discussed as essential to understanding the war as a military, political and cultural struggle.

HIST 397 ***Honours Seminar*** (6 credits)
Prerequisite: Approved Honours standing in history and completion of HIST 201, 202, 203 and 205. The

Honours Seminar has a two-fold purpose. It engages students in the advanced study of major exemplars of historical enquiry and method. It also ensures careful preparation for the Honours Essay Tutorial (HIST 493).

HIST 398 ***Selected Topics in History*** (3 credits)

HIST 399 ***Selected Topics in History*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

HIST 411 ***Advanced Study in Canadian History*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of Canada. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor. Topics may be selected from subjects as "Canadian Intellectual History", "The City in Canadian History", "Canada in the 1920's and 1930's", and "Canadian Social History".

HIST 426 ***Advanced Study in Late Classical and Medieval Europe*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of late classical and medieval Europe. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor.

HIST 430 ***Advanced Study in Early Modern Europe*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of early modern Europe. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor. Topics may be selected from such subjects as "Cultural Differentiation in Early Modern France and Germany" and "The Enlightenment".

HIST 436 ***Advanced Study in Modern Europe*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of modern Europe. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor. Topics may be selected from such subjects as "Popular Protest in Nineteenth-Century Europe", "Revolutionary Tradition in Nineteenth-Century France", "Fascism", "Background of World War I", and "Nationalism and Industrialization in Central Europe".

HIST 438 ***Advanced Study in British History*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of Great Britain. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor. Topics may be selected from such subjects as "Tudor England", "Stuart England", and "Structural Change in the English Countryside, 1500-1900".

HIST 441 ***Advanced Study in Russian and Soviet History*** (6 credits)
Prerequisite: Permission of the Department. This course deals with specific problems in Tsarist and Soviet Russia. In the Pre-Revolutionary period, attention is focused on the emancipation of the peasantry, industrialization, and the growth of the opposition parties. In the Soviet period, emphasis is placed on the problems of economic growth, the changing pattern of Soviet Marxism, and the nature of Soviet foreign policy.

HIST 451 ***Advanced Study in American History*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of the United States. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor.

HIST 461 ***Advanced Study in Asian History*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in Asian history. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year depending on the instructor.

HIST 470 ***Advanced Study in African History*** (6 credits)
Prerequisite: Permission of the Department. Seminar in a selected topic in the history of Africa. The emphasis is on encouraging students to conduct historical investigation on their own, under a professor's guidance. The specific content varies from year to year.

HIST 476 ***Advanced Study in the Third World: Imperialism and Revolution*** (6 credits)
Prerequisite: Permission of the Department. A comparison of the techniques and effects of imperialism in Asia, Africa, and Latin America during the late nineteenth and twentieth centuries. Modern independence and revolutionary movements in these areas are examined from a comparative perspective.

HIST 478 ***Advanced Study in Women's History*** (6 credits)
Prerequisite: Permission of the Department. This course deals with select aspects of the history and historiography of European and North American women from 1789 to the present.

HIST 493 ***Honours Essay Tutorial*** (6 credits)
Prerequisite: HIST 397 previously or concurrently. This course is open only to Honours students in history. The student works with an individual faculty member in a particular area of history. Students are asked to produce a sustained piece of written work, not exceeding forty pages in length, to be read by their adviser and at least one other member of the Department. Students enrolled in HIST 493 present their research to the HIST 493 colloquium.

HIST 498 ***Advanced Topics in History*** (3 credits)

HIST 499 ***Advanced Topics in History*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.170 Interdisciplinary Studies

Administrator
FLORENCE STEVENS

Adviser
MATTHEW SANTATERESA

The Faculty of Arts and Science *Principles of Education* (§31.001) reinforce the value of broadening skills and experience beyond the boundaries of a single concentration. The Faculty of Arts and Science recognizes that specialized and intensive knowledge in a particular discipline or field is a necessary part of the development of an educated person.
Interdisciplinary studies involves students in a range of thought, from scientific to humanistic. Courses are designed to illuminate principles, methods and skills that cross disciplinary boundaries. They are particularly intended for students whose programmes of study at the Bachelor's level are constrained by the demands of the working environment or graduate school.

INDIVIDUAL STUDIES

Under the direction of M. Santateresa, Academic Adviser, Faculty of Arts and Science *(SGW Campus)*

Individually Structured Programmes (Specialization or Honours)

Admission
Opportunities are available in some departments and programmes to follow an Individually Structured Specialization or Honours Programme. Students must apply to the department that seems most relevant to the central aspect of their proposed programme. Students in general must have demonstrated in their previous academic endeavours that they are capable of good (B level) achievement, but in exceptional cases a student may be admitted provisionally on the recommendation of the department undergraduate coordinator.
Formal entry to the ISP may occur only after completion of preparatory courses such as are required in Mature Entry and ECP programmes. Students wishing to follow an Honours programme must follow the Faculty procedures and regulations concerning admission to Honours programmes. (See Degree Requirements — Honours, §16.2.4 and 31.003.)

Academic Regulations
The programme will consist of not less than 60 credits. The courses chosen must be based on a departmental or programme core, usually the major, but not less than 24 credits. Students will thus be required to complete necessary prerequisites, and general preparation courses such as Research Methods or Statistics, so that they could later follow a regular departmental programme if they so desire.
A Specialization student must maintain* an average of C+ in all Specialization courses; the minimum acceptable grade in any single Specialization course is C-.
**for purposes of continuation in the programme from year to year as well as for graduation.*
The programme of study must be worked out at the time of student registration into the programme. Admission to the programme must be finalized before a student registers for the final 60 credits of the 90-credit portion of their degree. To allow for the non-availability of certain courses during certain sessions, allowable substitute courses must be listed in advance. Such substitution provisions will be necessary only in the case of specialized courses that are known not to be available on a session by session basis. The intention of this regulation is to assure that the programme does not become an *ad hoc* mixture of courses without clearly rationalized academic coherence.
Students must prepare a careful, not necessarily long, statement of their goals indicating the specific reasons for their programme choice. The rationale and the sequence of courses chosen must be approved by the departmental programme coordinator and the Vice Dean for Student Affairs.

INTERDISCIPLINARY STUDIES COURSES

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

INTE 215 ***Ideas in Mathematics*** (3 credits)
Mathematical ideas and techniques permeate western civilization, but because mathematics operates at a high level of abstraction and uses an esoteric language, its contribution is not well understood. Avoiding

mathematical technicalities as much as possible, this course attempts to demonstrate a few of the powerful ideas that have animated the development of mathematics. Examples of mathematical thinking from various periods of mathematical history are examined and related to their scientific and social impact.
NOTE: This course is designed as a suitable elective for students following an undergraduate programme. It has no formal prerequisites and will not qualify students to enrol for any other mathematics course, and cannot be used to satisfy a mathematics requirement in any BA or BSc programme.
NOTE: Students who have received credit for MATH 215 may not take this course for credit.

INTE 223 ***Critical Thinking*** (3 credits)
This course is designed to help students to think more clearly and critically and to improve their ability to present, defend, and evaluate arguments. Sample topics may include the nature of definition, validity and truth, formal and informal fallacies.
NOTE: Students who have received credit for PHIL 223 may not take this course for credit.

INTE 229 ***Philosophy and Literature*** (6 credits)
This course focuses on the interaction of philosophy and literature in a selected period of history (for example, the ancient world; the Middle Ages and Renaissance; and the modern world), through readings and discussion of literature with a high thematic content and philosophical writings with important literary connections.
NOTE: Students who have received a total of 6 credits for the set of courses consisting of INTE 230 or 231, **or** *a total of 6 credits for the set of courses consisting of INTE 232 or 233 may complete the sequence by taking INTE 229 in the appropriate year (6 credits).*

INTE 250 ***Introduction to Science and Human Affairs*** (3 credits)
The social and historical context of scientific and technological change. The reciprocal interactions of science with government, ideology, economic development, religion, literature and social theory; science and the city; science and the control of human life; science and human liberation; new definitions of scientific responsibility may be considered.
NOTE: Students who have received credit for SCHA 250 may not take this course for credit.

INTE 283 ***World History*** (6 credits)
A survey for non-major in History, designed principally for students in other departments and faculties, emphasizing basic concepts, comparative study, and awareness of global patterns of historical development. Development of writing and research skills is stressed in conference.
NOTE: Students who have received credit for HIST 283 may not take this course for credit.

INTE 290 ***Introduction to Computer Usage*** (3 credits)
This course is intended for students who would not normally encounter computers in their programme of study. It is designed to introduce them to fundamental uses of computers in word processing, data management and elementary programming, as a basis for more advanced applications within their disciplines.
This is accomplished by means of a series of tutorial packages combining printed text, video tapes and software. The format is self-instructional, encompassing 40 hours of hands-on experience in the laboratory.
NOTE: Students who have received credit for general computer courses may not take this course for credit.

INTE 291 ***Advanced Computer Usage*** (3 credits)
Prerequisite: INTE 290 or equivalent. This course introduces advanced uses of computer packages, including mail merge, electronic mail, file management, data communications. The format is self-instructional, using computer based tutorial packages, video tapes and text. A minimum of 40 hours laboratory work is required.

INTE 292 ***Computer Usage in the Sciences I*** (3 credits)
This course introduces the use of contemporary computing tools, (currently BASIC) in scientific applications. It is designed for students with some familiarity with the fundamentals of computing, who wish to use computers as tools for research within other disciplines (e.g. psychology, biology, mathematics). The format is largely self-instructional, using computer based tutorial packages. A minimum of 40 hours laboratory work is required.

INTE 293 ***Computer Usage in the Sciences II*** (3 credits)
This course introduces the use of contemporary computer tools (currently PASCAL) in scientific applications. It is designed for students with some familiarity with the fundamentals of computing, who wish to use computers as tools for research within other disciplines (e.g. psychology, biology, mathematics). The format is largely self-instructional, using computer based tutorial packages. A minimum of 40 hours laboratory work is required.

INTE 298 ***Special Topics*** (3 credits)

INTE 299 ***Special Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

INTE 398 ***Special Topics*** (3 credits)

INTE 399 ***Special Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

INTE 400 ***Generalized Empirical Methods*** (3 credits)
This course engages students in the task of integrating their university discipline into the more general enterprise of human knowing and deciding. Students reflect on their personal experience of knowing and deciding, and attempt to objectify this experience with the aid of a basic study of generalized empirical methodology. The text is selected from the works of Bernard Lonergan or of other comparable theorists.

INTE 498 ***Special Topics*** (3 credits)

INTE 499 ***Special Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.180 Journalism

Associate Professor and Director
LINDSAY CRYSLER

Associate Professor and Diploma Programme Director
ENN RAUDSEPP

Assistant Professor
ROSS PERIGOE

Sessional Lecturers
SHEILA ARNOPOULOS, *Freelance Journalist and Writer*
BOB MCDEVITT, *Freelance Broadcaster*
GAIL SCOTT, *Freelance Journalist and Writer*

Sessional Instructors
MARIANNE ACKERMAN, *Freelance Journalist*
DAVID ALLNUTT, *Media Consultant*
JAY BRYAN, *Business Writer, The Gazette*
MICHAEL COOKE, *Associate Managing Editor, The Gazette*
PETER COONEY, *Senior News Editor, The Gazette*
ABIGAIL CURKEET, *Freelance Journalist*
LEWIS HARRIS, *Reporter, The Gazette*
ROSA HARRIS-ADLER, *Freelance Journalist*
JANET KASK, *Freelance Journalist*
LINDA KAY, *Freelance Journalist*
ROD MACDONELL, *Investigative Reporter, The Gazette*
TRUDIE MASON, *Assignment Editor, CJAD*
ROBERT McCONNELL, *Media Consultant*
MINKO SOTIRON, *Freelance Writer*
JAMES STEWART, *Editorial Writer, The Gazette*
STEPHANIE WHITTAKER, *Freelance Journalist*

ADMISSION AND GRADUATION REQUIREMENTS

Enrolment in the writing workshops in the Department of Journalism is limited and depends on the applicants' successful completion of the admission procedures outlined in the following paragraphs.

All applicants should apply through the University Admissions Office; they must also contact the Department of Journalism office at 848-2465 before March 1.

Admission procedures include: a test of English proficiency; a letter of application of about 300 words describing the student's academic and work background and aspirations in journalism; and an interview. Although it will not determine acceptance, applicants are advised that a working knowledge of French is important.

A student must achieve a final mark of C or better in the reporting workshops in order to proceed to the next level.

To graduate with a Minor, Major or Specialization in Journalism, a student must demonstrate a working knowledge of French. Tests of oral and reading proficiency in French are administered by the Département d'études françaises on behalf of the Department of Journalism, which is responsible for the final evaluation of each student's competence.

Students are responsible for satisfying their particular degree requirements.

The superscript indicates credit value.

60 BA Specialization in Broadcast Journalism

NOTE: Students must meet the admission requirements of both the Departments of Communication Studies and Journalism. This programme is designed to prepare graduates for the English-language media.

Stage I

15 JOUR 201^{6}, COMS 240^{3}, 278^{3}, 284^{3}
3 Chosen from JOUR 205^{3}, 210^{3}, 215^{3}

Stages II

12 JOUR 302^{3}, 306^{3}, 310^{3}, 343^{3}
6 Chosen from COMS 378^{6}, 381^{6}, 387^{6}

Stage III

6 JOUR 415^{3}, 446^{3}
3 Chosen from JOUR 420^{3} or 430^{3}
15 Chosen from Communication clusters III, IV, and V at the 300 or 400 level.

60 BA Specialization in Journalism and Communication

NOTE: Students must meet the admission requirements of both the Departments of Communication Studies and Journalism. This programme is designed to prepare graduates for the English-language media.

Stage I

9 JOUR 201^{6}, COMS 240^{3}
6 Chosen from COMS 275^{3}, 278^{3}, 284^{3}

Stages II & III

9 JOUR 302^{3}, 303^{3}, 310^{3}
6 JOUR 400^{3}, 446^{3}
3 Chosen from JOUR 402^{3}, 404^{3}, 415^{3}, 430^{3}
6 Other Journalism credits—these may not be laboratory/workshop courses
21 Chosen from Communication clusters I, III, IV, V, with a maximum of 6 credits from Cluster I at the 300 or 400 level.

42 BA Major in Journalism

9 JOUR 201^{6}, 205^{3}
15 JOUR 302^{3}, 303^{3}, 306^{3}, 310^{3}, COMS 360^{3}

9 JOUR 400[3], 410[3], 446[3]
3 JOUR 402[3], 404[3], 415[3], 430[3]
6 From JOUR 210[3], 215[3], 343[3] or other designated Journalism or Communication Studies course.

30 Minor in Journalism
9 JOUR 201[6], 205[3]
9 JOUR 302[3], 303[3], 310[3]
9 JOUR 400[3], 410[3], 446[3]
3 JOUR 402[3], 404[3]

Written work in writing and reporting workshop courses is in English; please consult the Department.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

JOUR 201 ***Writing and Reporting I*** (6 credits)
Prerequisite: Enrolment in a Journalism programme. This course gives training in basic reporting and newswriting. Students practise writing news and receive out-of-classroom assignments.

JOUR 205 ***History of Journalism*** (3 credits)
A history of the news media in the English-speaking world, starting with the government gazettes of seventeenth-century England and their illegal, underground competition, through the "news" papers of the eighteenth century, the rise of the yellow press, the human interest story, the penny press in the nineteenth century, down to today's corporate press. The course is designed to show that our expectations of the news media are not inherent in human nature, but are the result of historical processes that continue to evolve.

JOUR 210 ***The Media in Québec*** (3 credits)
This course studies the special characteristics of Québec media, focusing particularly on the historical development of Québec journalism and the part it has played in the shaping of modern Québec. Particular attention is given to the influence of journalists in cultural and political affairs. The recent increasing concentration of media ownership are examined. Much of the reading material is in French.
NOTE: Students who have received credit for JOUR 305 may not take this course for credit.

JOUR 215 ***Contemporary News Media*** (3 credits)
This course introduces students to the increasingly complex structures of modern media. It examines the organizations, practices and problems of news media, focusing on key functions in their day-to-day activities. In any given year, it may explore in detail a particular development or problem in the news media.

JOUR 298 ***Special Topics in Journalism*** (3 credits)

JOUR 299 ***Special Topics in Journalism*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

JOUR 302 ***Reporting Methods*** (3 credits)
Prerequisite: JOUR 201. This course builds solid foundations for a variety of journalistic assignments: feature writing, background and in-depth reporting, analyses and investigative reporting. It is designed to help students understand and master a variety of information-gathering techniques, and overcome some of the hurdles confronting the contemporary journalist. It covers: information sources, interpretation and use of documents, access to information, and reporting and interviewing techniques to supplement official and conventional information sources.

JOUR 303 ***Feature Writing*** (3 credits)
Prerequisite: JOUR 302. This course is designed to help students develop and enhance their writing abilities, preparing for the broadest range of journalistic feature writing, from brief colour stories and profiles to in-depth articles. It consolidates interviewing techniques and introduces a variety of writing approaches. Students will be building the final foundations for a full spectrum of print-oriented writing assignments, preparing for advanced reporting work and the demands of specialized journalism.

JOUR 306 ***Radio News*** (3 credits)
Prerequisite: JOUR 302. Students learn to write for newscasts and for longer broadcast formats. There are field assignments in interviewing, tape editing, and preparation for broadcast.

JOUR 310 ***The Press and the Law*** (3 credits)
Prerequisite: JOUR 201, or permission of the Director. Lectures cover those aspects of criminal and civil law which bear most directly on the work of professional journalists — libel, slander, contempt of court.
NOTE: Students who have received credit for JOUR 405 may not take this course for credit.

JOUR 343 ***Broadcast Public Affairs*** (3 credits)
Prerequisite: JOUR 201, or permission of the Director. This course focuses on the principles, practices and debates in Canadian public affairs, radio and television. American broadcasting is also considered. The course also examines current affairs broadcasting in the world community.
NOTE: Students who have received credit for COMS 340, 342 or 343 may not take this course for credit.

JOUR 398 ***Special Topics in Journalism*** (3 credits)

JOUR 399 ***Special Topics in Journalism*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

JOUR 400 ***Advanced Reporting*** (3 credits)
Prerequisite: JOUR 303. Students are introduced to several areas of specialist reporting — economics and business, public affairs, medicine and science, the arts, etc. — and to a variety of journalistic treatments: background, interpretive and investigative reporting.
NOTE: Students who have received credit for JOUR 401 may not take this course for credit.

JOUR 402 ***Specialist Reporting*** (3 credits)
Prerequisite: JOUR 400. Students cover a beat in the field of their choice for several weeks, producing news, features, and background stories. A term-end major background story is also produced. There are seminars and discussions, with leaders from the media on the specifics of beat coverage and on general media topics, such as trade unionism, ethics, journalistic responsibility.

JOUR 404 ***Magazine Writing*** (3 credits)
Prerequisite: JOUR 400 and a qualifying assignment. This is a workshop for students who intend to write in the burgeoning magazine field. Students develop and apply the techniques used in a variety of magazine formats, from the highly specialized to the general: news magazines, special interest, topical or industrial publications, expansive feature formats, and internal corporate publications. It is of particular interest to students wishing a freelance career.

JOUR 410 ***Principles of Editing*** (3 credits)
Prerequisite: JOUR 302. Lectures and workshops in the art of story editing, with an introduction to layout and design. While the material used is designed primarily for print reproduction, the techniques, and particularly the intellectual processes employed are applicable to all media.

JOUR 415 ***Television News*** (3 credits)
Prerequisite: JOUR 306. The study of and practice in the application of news writing and editing for television. Classes and field assignments cover writing, interviewing, and editing of videotape for short television newscast items and for longer news feature formats.

JOUR 420 ***Advanced Television Journalism*** (3 credits)
Prerequisite: JOUR 415 and permission of the Department. An advanced workshop in television journalism, working in the areas of news and current affairs programming. Emphasis on editorial control and journalistic treatment of subjects. Weekly critiques by professor and invited guests.

JOUR 430 ***Advanced Radio Journalism*** (3 credits)
Prerequisite: JOUR 306 and permission of the Department. Workshop production of daily news on the student radio station. Students function as reporter, assignment editor, and news reader. Weekly critique by instructor and invited radio journalists.

JOUR 446 ***Ethics and Responsibility in Journalism*** (3 credits)
Prerequisite: JOUR 310 or permission of the Director. This course considers journalism in the context of philosophical and ethical principles. It aims to assess realistically the responsibilities of reporting and news analysis and to examine critically the role of journalism in society.
NOTE: Students who have received credit for COMS 446 may not take this course for credit.

JOUR 450 ***Independent Study*** (3 credits)
Prerequisite: Enrolment in a Journalism programme. Students who have demonstrated ability may, near the end of their programme, be allowed to undertake independent study, in either research or production, in an area of special interest in Journalism. The study or project is done in close collaboration with one or more members of the faculty.

JOUR 451 ***Independent Study*** (3 credits)
Prerequisite: Enrolment in a Journalism programme. Students who have received credit for JOUR 450 may register for JOUR 451.

JOUR 498 ***Advanced Special Topics in Journalism*** (3 credits)

JOUR 499 ***Advanced Special Topics in Journalism*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.185 Leisure Studies

Director
RANDY B. SWEDBURG, *Associate Professor*

Assistant Professor
PAULINE PETRYSHEN

There are three programmes within Leisure Studies. They are:

a) Bachelor of Arts, Specialization in Leisure Studies: consisting of 60 credits in Leisure Studies and 30 elective credits.
b) Bachelor of Arts, Specialization in Therapeutic Recreation: consisting of 60 credits in Therapeutic Recreation and 30 elective credits.
c) Bachelor of Arts, Major in Leisure Studies: consisting of 42 credits in Leisure Studies and 48 elective credits.

The growing awareness of leisure as a social and cultural force in society has led to a large resource commitment from all levels of government as well as the private sector.

Recreation and leisure are studied from a multidimensional perspective for those students interested in a career in leisure services, together with those students who foresee the increasing need for academic inquiry into the field.

The primary focus is on managing, programming, counselling and coordinating. The programmes draw from the departments of Applied Social Science, Biology, Études françaises, Exercise Science, Geography, History, Philosophy, Psychology, Sociology and the Faculties of Commerce and Administration, and Fine Arts.

The Therapeutic Recreation Specialization is designed to highlight the developing role of specialists in this field. The application of recreation as a specific intervention to promote independent functioning and positive leisure experiences is studied in a variety of clinical and community settings.

Requirements:

Students are required to complete the appropriate entrance profile (10.1) for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

All required and elected courses within the programme should be chosen in consultation with an adviser.

Additionally it will be required that students must maintain an overall average of 2.00 in order to (1) continue into the second and third years of their studies and (2) graduate.

Students registered in the programme who are not fluent in French are strongly advised to use some of their elective credits in pursuit of French-language competence.

Students are responsible for satisfying their particular degree requirements.

The superscript indicates credit value.

Students should consult with the Programme Adviser prior to registering for Leisure Studies courses.

60 BA Specialization in Leisure Studies

33 LESR 241^{3}, 261^{3}, 371^{3}, 427^{3}, 431^{3}, 464^{6}; HIST 215^{3}; PHIL 255^{3}; PSYC 286^{3}; SOCI 344^{3*}

6 Chosen from either SOCI 310^{6*} or PSYC 310^{3} and PSYC 315^{3}

21 Chosen from either List X or List Y

LIST X
ECON 201^{3}, 203^{3}
MANA 266^{3}, 340^{3}
MARK 213^{3}, 350^{3}
ACCO 213^{3}, 218^{3}
FINA 314^{3}, 315^{3}

LIST Y
APSS 240^{6}
ART 200^{6}
EXCI 370^{6}, 455^{3}
FRAN 311^{3}
GEOG 352^{3}, 353^{3}
LESR 281^{3}, 298^{3**}, 299^{6**}, 340^{3}, 350^{3}, 398^{3**}, 399^{6**}, 450^{3}, 490^{3**}, 491^{3**}, 498^{3**}, 499^{6**}

**NOTE: To enter SOCI 310 a student must have obtained credit for SOCI 203 or equivalent; to enter SOCI 344 a student must have obtained credit for SOCI 203 or 220.*

***NOTE: In fulfillment of programme requirements students are allowed a maximum total of six credits from these courses.*

60 BA Specialization in Therapeutic Recreation

I. Leisure Studies

27 LESR 241^{3}, 261^{3}, 427^{3}, 464^{6}; HIST 215^{3}; PHIL 255^{3}; PSYC 286^{3}; SOCI 344^{3*}

II.

6 Chosen from either SOCI 310^{6*} or PSYC 310^{3} and 315^{3}

III. Therapeutic Recreation

27 LESR 281^{3}, 350^{3}, 381^{3}, 432^{3}, 450^{3}, 481^{3}, 485^{3}; BIOL 200^{6}

**NOTE: To enter SOCI 310 a student must have obtained credit for SOCI 203 or equivalent; to enter SOCI 344 a student must have obtained credit for SOCI 203 or 220.*

42 **BA Major in Leisure Studies**

24 LESR 241[3], 261[3], 427[3], 431[3]; HIST 215[3]; PHIL 255[3]; PSYC 286[3]; SOCI 344[3*]

18 Chosen from either List X or Y

LIST X

ECON 201[3], 203[3]
MANA 266[3], 340[3]
MARK 213[3], 350[3]
ACCO 213[3], 218[3]
FINA 314[3], 315[3]

LIST Y

APSS 240[6]
ART 200[6]
EXCI 370[6], 455[3]
FRAN 311[3]
GEOG 352[3], 353[3]
LESR 281[3], 298[3**], 299[6**], 340[3], 350[3], 371[3], 398[3**], 399[6**], 450[3], 464[6], 490[3**], 491[3**], 498[3**], 499[6**]

**NOTE: To enter SOCI 310 a student must have obtained credit for SOCI 203 or equivalent; to enter SOCI 344 a student must have obtained credit for SOCI 203 or 220.*

***NOTE: In fulfillment of programme requirements students are allowed a maximum total of six credits from these courses.*

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

LESR 241 ***Recreation and Leisure in Contemporary Society*** (3 credits)
The course provides a basis for understanding recreation and leisure as increasingly important aspects of our culture. In an era of rapidly changing life styles, with a high incidence of anxiety and frustration, the value of worthy use of free time in maintaining mental and physical health is presented. Topics discussed include: motivations for participation in leisure and recreation; social, psychological and historical foundations of leisure; education for leisure; and the analysis of special problems.

LESR 261 ***Principles of Leisure Services*** (3 credits)
The fundamental concepts of programming in the field of leisure studies is the focus of this course. Analysis of planning models in social, cultural, physical, intellectual and adventure recreation, as they relate to the provision of leisure services is the basis of study. Lectures and field study.
NOTE: Students who have received credit for LESR 250 may not take this course for credit.

LESR 281 ***Introduction to Therapeutic Recreation*** (3 credits)
An examination of the fundamental concepts of Therapeutic Recreation. Included is the study of the historical foundations and the basic terminology, purposes and theories of therapeutic recreation.
NOTE: Students who have received credit for LESR 393 may not take this course for credit.

LESR 298 ***Selected Topics in Leisure Studies*** (3 credits)

LESR 299 ***Selected Topics in Leisure Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LESR 340 ***Employee Recreation Services*** (3 credits)
Examination of the origins and development of recreation related to the place of employment. Critical analysis of the research literature in the areas of: work/leisure relationships; cost/benefits; government intervention; programme design and family involvement.

LESR 350 ***Leisure Education*** (3 credits)
An introduction to the field of leisure education. The history and underlying philosophy of the concept is presented. The roles of the school, community and community-serving agencies are examined. Existing models are analyzed and discussed.

LESR 371 ***Concepts in Community Recreation Programming*** (3 credits)
Prerequisite: LESR 261. A comprehensive analysis of current Community Recreation practices with emphasis on community leisure needs, assessments, cultural programming, leadership, volunteers, evaluation and resource integration.
NOTE: Students who have received credit for LESR 250 may not take this course for credit.

LESR 381 ***Concepts in Therapeutic Recreation Programming*** (3 credits)
Prerequisite: LESR 261. A comprehensive analysis of current Therapeutic Recreation practices with emphasis on rehabilitation in community and clinical settings such as hospitals, group homes, psychiatric centres, rehabilitation clinics and correctional centres. Leisure planning and assessment models are studied to identify the modes of recreational activity which may be used as an intervention.

LESR 398 ***Intermediate Selected Topics in Leisure Studies*** (3 credits)

LESR 399 ***Intermediate Selected Topics in Leisure Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LESR 427 ***Administration of Leisure Services*** (3 credits)

Prerequisite: Enrolment in the final year* of a Leisure Studies programme or permission of Programme Director. Analysis of the processes involved in planning and managing leisure service delivery systems. Topics to be studied include principles of planning, organization, budgeting and supervision.

**30 credits or less remaining in degree programme*

NOTE: Students who have received credit for LESR 426 may not take this course for credit.

LESR 431 ***Leisure Studies Seminar*** (3 credits)

Prerequisite: Enrolment in the final year* of a Leisure Studies programme. This is a third-year interdisciplinary seminar in which students can tie together all they have learned in the Leisure Studies Programme. Additionally, students are set on a course of study that should continue after they graduate so that they can keep up with future developments in this area.

**30 credits or less remaining in programme*

NOTE: Students who have received credit for INTE 430/LESR 430 may not take this course for credit.

LESR 432 ***Seminar in Therapeutic Recreation*** (3 credits)

Prerequisite: Enrolment in the final year* of Specialization in Therapeutic Recreation. A third-year integrative seminar which allows students to consolidate all they have learned in their studies. Students will critically evaluate current issues in the field and commence a course of study that should continue after graduation, allowing them to keep up with future developments in Therapeutic Recreation.

**30 credits or less remaining in programme*

LESR 450 ***Leisure Counselling*** (3 credits)

Prerequisite: Enrolment in second year* of a Leisure Studies programme or permission of Programme Director. The application of counselling theory to the field of leisure services is considered in this course. The aims, methods, concepts and assessment tools are the focus of study. Lectures and laboratories.

**60 credits or less remaining in programme*

LESR 464 ***Leisure Studies Internship*** (6 credits)

Prerequisite: Enrolment in the final year* of a Leisure Studies programme. In consultation with their mentors, students are given the opportunity to study theoretical and practical problems confronting professionals in the field of Recreation. The course offers a supervised period of work with a selected organization. Each student, during seminar sessions, formulates a study proposal. The internship commences when the proposal has been approved. The course involves a minimum of a six-week 240-hour period.

**30 credits or less remaining in programme*

LESR 481 ***Therapeutic Recreation and Special Populations*** (3 credits)

Prerequisite: LESR 281. An overview of the services required for individuals with special needs. Analysis of the barriers to recreational participation along with the planning/designing of a safe and accessible recreational environment are major focuses of the course. Legislation trends and resources for community recreation integration are also studied.

LESR 485 ***Therapeutic Recreation Internship*** (3 credits)

Prerequisite: Enrolment in the final year* of Specialization in Therapeutic Recreation; LESR 464 must be taken concurrently. In consultation with their mentors, students are given the opportunity to study theoretical and practical problems confronting professionals in the field of Therapeutic Recreation. The course offers a supervised work experience in an organization offering therapeutic recreation programmes. Each student, during seminar sessions, formulates a study proposal. The internship commences when the proposal has been approved. The internship involves a minimum three-week 120-hour period.

**30 credits or less remaining in programme*

LESR 490 ***Independent Study I*** (3 credits)

Prerequisite: Permission of the Programme Director. Students work on topics in consultation with a study supervisor. The study may include readings, field studies, and/or research.

LESR 491 ***Independent Study II*** (3 credits)

Prerequisite: Permission of the Programme Director. A student who has received credit for LESR 490 may register for LESR 491.

LESR 498 ***Advanced Topics in Leisure Studies*** (3 credits)

LESR 499 ***Advanced Topics in Leisure Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.190 Library Studies

Director
JOANNE LOCKE, *Assistant Professor*

Associate Professor
ANNE M. GALLER

Assistant Professor
MARLENE GIGUERE

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).
Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

36 BA Major in Library Studies
3 LIBS 205^3
15 LIBS 303^3, 305^3, 320^3, 324^6
12 LIBS 350^3, 355^3, 410^3, 495^3
6 LIBS electives in consultation with the Programme Adviser

60 Certificate in Library Studies
30 LIBS 205^3, 303^3, 305^3, 320^3, 324^6, 350^3, 355^3, 410^3, 495^3
6 LIBS electives in consultation with the Programme Adviser
24 Electives

NOTE: All Library Studies students must take LIBS 205 as a prerequisite to all other Library courses, the only exception being LIBS 411, 433 and 461.
The Library Studies Programme offers a *Major in Library Studies* to those who wish to pursue a career in library work at a non-graduate level. For those interested in taking advanced studies in any subject area including Library and/or Information Science/Studies at the Master's level, consultation with an Adviser at the beginning of the Programme is recommended.
All students must preregister with the Programme and obtain course approval prior to the date of registration.
Students will be expected to maintain an average of C throughout the Programme.
The Certificate in Library Studies is offered to meet the needs of students who may not wish to fulfill the requirements of a Bachelor of Arts degree. Sixty (60) credits are required to complete the Certificate Programme, thirty-six (36) of which consist of Library Studies, with twenty-four (24) credits of electives. Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Diploma in Library Studies
The Department also offers a diploma programme for students who have completed their undergraduate degree in another field. Detailed information on the programme is given in the University's Calendar of Graduate Studies.

Prerequisites To All Other Courses
LIBS 205 Introduction to Library Services (3 credits)

Required Courses
LIBS 303 Information Services (3 credits)
LIBS 305 Bibliographic Searching (3 credits)
LIBS 320 Cataloguing (3 credits)
LIBS 324 Subject Access and Classification (6 credits)
LIBS 350 Automated Library Systems I (3 credits)
LIBS 355 Automated Library Systems II (3 credits)
LIBS 410 Online Information Retrieval (3 credits)

Electives
LIBS 298 Selected Topics in Library Studies (3 credits)
LIBS 299 Selected Topics in Library Studies (6 credits)
LIBS 398 Selected Topics in Library Studies (3 credits)
LIBS 399 Selected Topics in Library Studies (6 credits)
LIBS 407 Research Methodology (3 credits)
LIBS 409 Library Research and Library Resources in Science and Technology (3 credits)
LIBS 411 Library Service and Work with Children (3 credits)
LIBS 421 Library Service and Work in Schools (3 credits)
LIBS 432 Library Service and Work in the College and University (3 credits)
LIBS 433 Technical Skills — Multi-Media Operations (3 credits)

LIBS 435 The Organization of Audiovisual Collections (3 credits)
LIBS 441 Library Service and Work in Business and Industry (3 credits)
LIBS 451 Library Service and Work in the Public Library (3 credits)
LIBS 461 Library Service and Work with the Young Adult (3 credits)
LIBS 498 Advanced Topics in Library Studies (3 credits)
LIBS 499 Advanced Topics in Library Studies (6 credits)

Final Required Course
LIBS 495 Field Practice (3 credits)

Recommended Academic Electives
FRAN 316 Le français de la bibliothéconomie I (3 crédits)
FRAN 317 Le français de la bibliothéconomie II (3 crédits)

Electives Open to Non-Library Studies Students Only
LIBS 250 Introduction to Library Research Practices (3 credits)

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

LIBS 205 ***Introduction to Library Services*** (3 credits)
This course, which is the prerequisite to all others in the programme, introduces the student to the organization, functions and services in various types of libraries. Basic information sources available in the literature of librarianship and bibliographic form used in documenting research will also be covered.
NOTE: Students who have received credit for LIBS 201 and LIBS 202 may not take this course for credit.

LIBS 250 ***Introduction to Library Research Practices*** (3 credits)
This course is designed to introduce students to basic library research practices. It familiarizes students with a variety of information sources in both print and nonprint formats. Emphasis is placed on a systematic search strategy in the use and evaluation of these information tools. Topics such as outlining and bibliographic format are covered as part of the library research process.
NOTE: Library Studies students may not take this course. Students in degree programmes in Library Studies may not take this course for Library Studies credit.

LIBS 298 ***Selected Topics in Library Studies*** (3 credits)

LIBS 299 ***Selected Topics in Library Studies*** (6 credits)

Specific topics for these courses will be stated in the Undergraduate Class Schedule. Prerequisites relevant in each case to be discussed with the Academic Adviser.

LIBS 303 ***Information Services*** (3 credits)
Prerequisite: LIBS 205. This course examines the theories and principles of information services and literature searching. Standard general reference works are studied.

LIBS 305 ***Bibliographic Searching*** (3 credits)
Prerequisite: LIBS 205. This course examines the theories and principles of reference work and provides a broad introduction to bibliographic searching. General and subject bibliographies, indexes and abstracts are examined and evaluated.

LIBS 320 ***Cataloguing*** (3 credits)
Prerequisite: LIBS 205. Familiarity with a computer keyboard is desirable. This course is designed to give the student a basic knowledge of bibliographic control in both manual and automated environments. Emphasis is on pre-cataloguing routines, descriptive cataloguing, MARC coding, and online editing.

LIBS 324 ***Subject Access and Classification*** (6 credits)
Prerequisite: LIBS 320. This course is designed to give the student, who possesses a thorough understanding of descriptive cataloguing, a basic knowledge of the principles of subject cataloguing and classification. While emphasis is placed on Sears and Library of Congress Subject Headings and the Dewey Decimal and Library of Congress Classification Systems, the principles learned are transferable to other subject cataloguing and classification schemes.
NOTE: Students who have received credit for LIBS 325 and LIBS 330 may not take this course for credit.

LIBS 350 ***Automated Library Systems I*** (3 credits)
Prerequisite: LIBS 205. This course deals with automation as a tool for improvement of library processes and services. The fundamental principles of computer applications in library systems are covered with emphasis on microcomputers. The course focuses on the areas of acquisitions and cataloguing and how automation can be applied to these functions.

LIBS 355 ***Automated Library Systems II*** (3 credits)
Prerequisite: LIBS 350. This course continues the study of automation as a tool for improving library processes and services. Areas examined include serials control, circulation, reference services, and

spreadsheet applications for libraries. Current trends and future developments in software and hardware for library automation are covered.

LIBS 398 ***Selected Topics in Library Studies*** (3 credits)

LIBS 399 ***Selected Topics in Library Studies*** (6 credits)

Specific topics for these courses will be stated in the Undergraduate Class Schedule. Prerequisites relevant in each case to be discussed with the Academic Adviser.

LIBS 407 ***Research Methodology*** (3 credits)
Prerequisite: LIBS 303; LIBS 305. The aim of this course is to develop an understanding and appreciation of research methods and approaches specific to subject disciplines, based on the consideration of general principles of research methodology and the planning of logical research strategies. The library-oriented approach ensures a solid background of data from which problems may be attacked and solutions derived. Topics covered in logical progression include: selecting and defining the problem; planning the research programme; developing and testing hypotheses; collecting, classifying, evaluating, and analyzing evidence; drawing conclusions; presenting results. The course assumes general knowledge of reference and bibliographic sources for at least one academic discipline. Students are evaluated principally on a term paper related to a research strategy, and methods applied to a problem of their own choosing, and on class participation.

LIBS 409 ***Library Research and Library Resources in Science and Technology*** (3 credits)
Prerequisite: LIBS 205; or enrolment in a Major in science or engineering. The course is designed to introduce Science and Engineering undergraduates, as well as the Library Studies student, to the structure of scientific literature, to the basic types of information sources in Science and Technology, and to information networks, and computer-based retrieval systems. The student also becomes familiar with search strategies and indexing techniques. Emphasis is placed on developing skills in the student's particular discipline or interest.

LIBS 410 ***Online Information Retrieval*** (3 credits)
Prerequisite: LIBS 305. A theoretical and practical introduction to the operation and use of online information retrieval systems. Emphasis is on database file structure, search protocol, Boolean logic, vocabulary control, and search strategy development in relation to searching bibliographic and full text databases.

LIBS 411 ***Library Service and Work with Children*** (3 credits)
The course is designed to introduce the student to the major genres of children's literature. The student examines the methods used in the library to stimulate the child's love of reading and evaluates children's literature through assignments, films and a field trip to a children's library.

LIBS 421 ***Library Service and Work in Schools*** (3 credits)
Prerequisite: LIBS 205. The duties and responsibilities of the library assistant, library technician and teacher-librarian are discussed. Topics include programmes for teaching the use of the library, methods for cooperating with teachers, the assembling of materials for instructional units, responding to curriculum demands upon the library, and examining the effects of new curriculum trends in education upon the school library/resource centre.

LIBS 432 ***Library Service and Work in the College and University*** (3 credits)
Prerequisite: LIBS 205. The organization, administration, and functions of academic libraries are studied, with special references to curriculum-oriented library service, and to services relating to large academic research libraries and college libraries.

LIBS 433 ***Technical Skills — Multi Media Operations*** (3 credits)
This course is mainly practical in nature. It provides the student with the opportunity to operate a broad range of audio-visual equipment found in the modern media centre. It also introduces the student to the concept of audio-visual media as instructional tools within the library/media centre, by requiring the design, development and evaluation of an instructional audio-visual project on some aspect of library studies.
NOTE: Students who have received credit for LIBS 333 may not take this course for credit.

LIBS 435 ***Organization of Audio-Visual Collections*** (3 credits)
Prerequisite: LIBS 320. All aspects of audio-visual materials available in public, university, school and special libraries are studied. The student is introduced to basic reference sources, aids for acquisition, ordering, storage and circulation. Coverage also includes pre-cataloguing routines and MARC coding. Materials featured are those frequently found in libraries, such as records, cassettes, films, kits and slides as well as those which are becoming more common such as microforms, video-cassettes and video-tapes as well as computer programmes and software.

LIBS 441 ***Library Service and Work in Business and Industry*** (3 credits)
Prerequisite: LIBS 205. The role of the library in relation to business and industry is examined. The specific skills and devices employed to provide direct information to the users are explored. Management and administrative concerns are reviewed from the viewpoint of the library and the sponsoring organization.

LIBS 451 ***Library Service and Work in the Public Library*** (3 credits)
Prerequisite: LIBS 205. This course traces the development of the public library, particularly in Québec. It deals with the objectives, roles, and functions of public library service in contemporary society. Topics such as freedom of access to information, copyright, public lending right, and collection and preservation of library materials are explored.

LIBS 461 ***Library Service and Work with the Young Adult*** (3 credits)
This course explores through books the major phenomena of the teenager's world. Some of the skills needed to serve young adults in a library setting are examined. Literature written especially for young adults, and some adult literature which is especially popular with, and suitable for, young people, is studied. A pre-course reading list is available.

LIBS 495 ***Field Practice*** (3 credits)
Prerequisite: Completion of all other required library studies courses. In consultation with the appropriate supervising librarian the student is placed in a local library system other than in a library in which the student is employed. The duration of the field practice is five weeks. Field practice includes a wide variety of library tasks. In addition the student is required to complete a written research project on a topic approved by the professor.

LIBS 498 ***Advanced Topics in Library Studies*** (3 credits)

LIBS 499 ***Advanced Topics in Library Studies*** (6 credits)

Specific topics for these courses will be stated in the Undergraduate Class Schedule. Prerequisites relevant in each case to be discussed with the Academic Adviser.

31.200 Mathematics and Statistics

Chair
WILLIAM BYERS, *Associate Professor*

Professors
SYED TARIQ ALI
ABRAHAM BOYARSKY
YOGENDRA CHAUBEY
TRYAMBKESHWAR DWIVEDI
RICHARD HALL
JOHN HARNAD
NICHOLAS HERSCOVICS
JOEL HILLEL
ZOHEL KHALIL
HERSHY KISILEVSKY
ROBERT RAPHAEL
JOHN SENEZ
RONALD STERN
MANFRED SZABO

Professor Emeritus
DAVID WHEELER

Professor of Mathematics and Computer Science
JOHN McKAY

Associate Professors
LEONDA S. ADLER
KAILASH K. ANAND
MORTON M. BELINSKY
MICHAEL V. BOBETIC
MARY A. BRIAN
JOSEF BRODY
GERARD E. COHEN
MAURICE COHEN
STANLEY ERLWANGER
JAMES C. HAYES
ATTILA KEVICZKY
HAYON KIM
GIRI LINGAPPAIAH
MOHAMMAD A. MALIK
HAROLD W. PROPPE
ANNA SIERPINSKA
JOSEPH SORIC
TARIQ SRIVASTAVA
JEAN C. TURGEON
YAO H. WANG
MOHAMMAD ZAKI

Assistant Professors
CHRISTOPHER J. CUMMINS
MARYSE DESROCHERS
JOSE GARRIDO
MICHEL JACQUES
MARK TEMPLE-RASTON

Adjunct Associate Professors
HENRY HUNG
JOHN SELDIN

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

A student wishing to follow a Mathematics Programme but not meeting the entrance requirements should consult with the Department.

By careful choice of electives, students can select whether the emphasis of the programme will be in the area of Pure Mathematics, Applied Mathematics, Statistics or Actuarial Mathematics.

Students who already had Honours status by June 1st, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

Students in a Mathematics programme may not take any of the following courses for credit: EMAT 212, 232, 252, 271. Students wishing to take other Engineering Mathematics courses for credit must obtain prior approval of the Department.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

66 BA or BSc Honours in Mathematics

48 MATH 231^3, 242^3, 243^3, 262^3, 263^3, 271^3, 282^3, 283^3, 362^3, 363^3, 366^3, 393^3, 394^3, 464^3, 467^3, 491^3

12 MATH chosen with prior departmental approval from MATH 322^3, 334^3, 373^3, 380^3, 381^3, 392^3, 466^3, 480^3, 492^3, 496^3

6 MATH chosen with prior departmental approval

60 BA or BSc Specialization in Mathematics

39 MATH 231^3, 242^3, 243^3, 262^3, 263^3, 271^3, 282^3, 283^3, 362^3, 363^3, 366^3, 393^3, 394^3

15 MATH chosen with prior departmental approval from MATH 322^3, 334^3, 373^3, 380^3, 381^3, 392^3, 464^3, 466^3, 467^3, 491^3

6 MATH chosen with prior departmental approval

36 BA or BSc Major in Mathematics

30 MATH 231^3, 242^3, 243^3, 262^3, 263^3, 271^3, 282^3, 283^3, 362^3, 393^3

6 MATH chosen with prior departmental approval from MATH 322^3, 363^3, 366^3, 373^3, 380^3, 392^3, 394^3

66 BA or BSc Honours in Statistics

51 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 348[3], 351[3], 362[3], 363[3], 443[3], 448[3], 454[3], 464[3], 467[3]

9 MATH chosen with prior departmental approval from MATH 334[3], 342[3], 343[3], 347[3], 353[3], 445[3], 451[3]

6 MATH chosen with prior departmental approval

60 BA or BSc Specialization in Statistics

45 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 348[3], 351[3], 362[3], 363[3], 443[3], 448[3], 454[3]

9 MATH chosen with prior departmental approval from MATH 334[3], 342[3], 343[3], 347[3], 353[3], 445[3], 451[3]

6 MATH chosen with prior departmental approval

36 BA or BSc Major in Statistics

30 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 348[3], 448[3]

6 MATH chosen with prior departmental approval from MATH 342[3], 343[3], 347[3], 351[3], 353[3], 443[3], 454[3]

66 BA or BSc Honours in Actuarial Mathematics

57 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 311[3], 326[3], 327[3], 337[3], 348[3], 362[3], 363[3], 427[3], 437[3] 448[3], 464[3]

6 MATH 229[2], 329[2], 429[2]

3 MATH chosen with prior departmental approval from MATH 428[3], 443[3], 467[3]

60 BA or BSc Specialization in Actuarial Mathematics

54 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 311[3], 326[3], 327[3], 337[3], 348[3], 362[3], 363[3], 427[3], 437[3], 448[3]

6 MATH 229[2], 329[2], 429[2]

66 BA or BSc Honours in Applied Mathematics

54 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 311[3], 336[3], 337[3], 362[3], 363[3], 371[3], 436[3], 437[3], 464[3], 467[3]

12 MATH or cognate disciplines chosen with prior departmental approval

60 BA or BSc Specialization in Applied Mathematics

48 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 311[3], 336[3], 337[3], 362[3], 363[3], 371[3], 436[3], 437[3]

12 MATH or cognate disciplines chosen with prior departmental approval

36 BA or BSc Major in Applied Mathematics

30 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3], 336[3], 436[3]

6 MATH chosen with prior departmental approval from MATH 311[3], 312[3], 337[3], 371[3], 373[3], 432[3], 437[3]

24 Minor in Mathematics

24 MATH 231[3], 242[3], 243[3], 262[3], 263[3], 271[3], 282[3], 283[3]

24 Minor in Statistics

24 MATH 231[3], 242[3], 243[3], 282[3], 283[3], 343[3], 348[3], 448[3]

24 Minor in Mathematics for Students in BA Programmes

24 MATH credits approved by the Department of Mathematics. At least 12 credits must be at the level of MATH 231 or above.

NOTE: Students in BA programmes are also eligible for a regular Minor in Mathematics or Statistics provided they have the necessary prerequisites.

MATHEMATICS AND STATISTICS CO-OPERATIVE PROGRAMME

Director

MORTON M. BELINSKY, *Associate Professor*

The Mathematics and Statistics Co-operative Programme is offered to students who are enrolled in the BA or BSc Honours or Specialization programmes. Students interested in applying for the Mathematics and Statistics Co-op should refer to §23 where a full description of the admission requirements is provided.

Academic content is identical to that of the regular programme, but six study terms are interspersed with four work terms.

Each student is supervised personally and must meet the requirements specified by the Faculty of Arts and Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Mathematics and Statistics Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

MATH 200 ***Fundamental Concepts of Algebra*** (3 credits)

This course is designed to give students the background necessary for MATH 201. Some previous exposure to algebra is assumed. Sets, algebraic techniques, inequalities, graphs of equations.

NOTE: Students who have received credit for MATH 201 or equivalent may not take this course for credit.

NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 201 ***Elementary Functions*** (3 credits)
Sets, inequalities, graphs of functions, and relations. Trigonometric, exponential, and logarithmic functions. Lectures and laboratory.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 202 ***College Algebra*** (3 credits)
Progressions, combinations, permutations, binomial theorem, mathematical induction, inequalities, polynomials, cartesian and polar forms of complex numbers; conics.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 203 ***Differential and Integral Calculus I*** (3 credits)
Prerequisite: MATH 201, or equivalent. Functional notation. Differentiation of polynomials. The power, product, quotient, and chain rules. Differentiation of elementary functions. Implicit differentiation. Higher derivatives. Maxima and minima. Applications: tangents to plane curves, graphing, related rates. Approximations using the differential. Antiderivatives, definite integrals, area. Lectures and laboratory.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 204 ***Vectors and Matrices*** (3 credits)
Prerequisite: MATH 202 or equivalent. Algebra and geometry of vectors, dot and cross products, lines and planes. System of equations, operations on matrices, rank, inverse, quadratic form and rotation of axes.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 205 ***Differential and Integral Calculus II*** (3 credits)
Prerequisite: MATH 203. Techniques of integration: substitutions, integration by parts, partial fractions. Improper integrals. Physical applications of the definite integral. Infinite series: tests for convergence. Power series, Taylor's theorem. Lectures and laboratory.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 206 ***Algebra and Functions*** (3 credits)
Coordinate systems. Radicals and distance formula. Polynomials, factoring and graphing. Relations and functions. Linear and quadratic functions, equations and systems. Exponents, exponential and logarithmic functions and equations.
NOTE: Students who have received credit or exemption for a course at the level of MATH 201 or above may not take this course for credit.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 207 ***Statistics for the Social Sciences*** (3 credits)
Prerequisite: MATH 206 or equivalent, or permission of the Department of Mathematics. Elementary probability, permutations and combinations, binomial and normal distribution. Analysis and organization of statistical data. Tests of hypotheses. Confidence limits. Introduction into linear regression and correlation. Lectures and laboratory. *NOTE See §200.7*
NOTE: Students who have received credit for MATH 242, 243 or equivalent may not take this course for credit.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 208 ***Fundamental Mathematics I*** (3 credits)
Prerequisite: MATH 206, or equivalent. This course is intended primarily for pre-Commerce students. Matrices, Gaussian elimination, input-output analysis, progressions, compound interest, annuities, permutations and combinations, probability, binomial theorem, exponential and logarithmic functions, inequalities; linear programming.
NOTE: Students who have received credit for MATH 202 or equivalent may not take this course for credit.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 209 ***Fundamental Mathematics II*** (3 credits)
Prerequisite: MATH 206, or equivalent. This course is intended primarily for pre-Commerce students. Limits, differentiation of rational, exponential, and logarithmic functions, theory of maxima and minima, integration.
NOTE: Students who have received credit for MATH 203 or equivalent may not take this course for credit. Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 210 ***Mathematics for the Biological Sciences I*** (3 credits)
Prerequisite: CEGEP Mathematics 103, or equivalent. Discrete probability, probability distributions, difference equations, differential equations, transients, steady-state solutions, system concept, block

diagrams, linear programming, game theory. Markov chains, applications to ecology, population models, physiology.

MATH 211 ***Fundamental Mathematics III*** (3 credits)
Prerequisite: MATH 209. This course is intended primarily for pre-Commerce students. Functions of two variables, partial derivatives, maxima and minima; iterated integrals; difference and differential equations, Taylor polynomials, root approximations, numerical integration.
NOTE: Students who have received credit for MATH 205 or equivalent may not take this course for credit.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

MATH 215 ***Ideas in Mathematics I*** (3 credits)
Mathematical ideas and techniques permeate Western civilization, but because mathematics operates at a high level of abstraction and uses an esoteric language, its contribution is not well understood. Avoiding mathematical technicalities as much as possible, this course attempts to demonstrate a few of the powerful ideas that have animated the development of mathematics. Examples of mathematical thinking from various periods of mathematical history are examined and related to their scientific and social impact.
NOTE: This course is designed as a suitable elective for students following an undergraduate programme. It has no formal prerequisites and will not qualify students to enroll for any other mathematics course, and cannot be used to satisfy a mathematics requirement in any BSc or BA programmes.

MATH 216 ***Ideas in Mathematics II*** (3 credits)
The aim of this course is the same as that of MATH 215 but different topics are covered.
NOTE: This course is designed as a suitable elective for students following an undergraduate programme. It has no formal prerequisites and will not qualify students to enroll for any other mathematics course, and cannot be used to satisfy a mathematics requirement in any BSc or BA programmes.

MATH 220 ***Mathematical Methods in Chemistry*** (3 credits)
Prerequisite: CEGEP Mathematics 203, or equivalent. Partial derivatives. First-order differential equations (first- and second-order chemical reactions). Hermite, Laguerre, and Legendre equations. Solutions by power series. Eigen-functions and eigenvalues, Sturm-Liouville Theory.

MATH 225 ***Introduction to Actuarial Mathematics*** (3 credits)
Prerequisite: MATH 202 or MATH 208; MATH 203 or MATH 209 or equivalent. Simple-interest, compound interest, force of interest; annuities-certain, continuous annuities-certain, perpetuities; amortization and sinking funds, graduated mortgage schemes; bonds and related securities; capital cost and depletion. Brief introduction to life insurance.

MATH 229 ***Workshop in Actuarial Mathematics I*** (2 credits)
Prerequisite: MATH 263; MATH 283 previously or concurrently or permission of the Department. This workshop is intended to prepare students for the General Mathematics Examination of the Society of Actuaries and the Casualty Actuarial Society. Special topics from calculus, introductory real analysis, and linear algebra which are not normally included in first courses are covered with the instructor.

MATH 231 ***Introduction to Applied Mathematics*** (3 credits)
Prerequisite: MATH 282 or equivalent. Introduction to the theory of optimization, linear programming, the Simplex Method. Deterministic and stochastic models for growth processes. Introduction to graphs and networks. Applications.
NOTE: Only 3 credits will be awarded from MATH 231, DESC 313, ENGR 412.

MATH 232 ***Computing in Mathematics*** (3 credits)
Prerequisite: CEGEP Mathematics 105; CEGEP Mathematics 203; or equivalent. Introduction to APL, primitive and dyadic operators, simple and mixed functions. Programming and editing, dealing with workspaces. Applications to calculus (sequences, series, convergence and integrals), to statistics (simulations, combinatorics and distributions) and to algebra (systems of equations, matrices and non-linear equations).

MATH 242 ***Introduction to Probability*** (3 credits)
Prerequisite: CEGEP Mathematics 203, or equivalent. Elementary combinatorics, elementary rules of probability, random variables, probability distributions, mathematical expectation, sampling distributions.
NOTE See §200.7

MATH 243 ***Introduction to Mathematical Statistics*** (3 credits)
Prerequisite: MATH 242, or equivalent. Point and interval estimation, hypothesis testing, non-parametric methods, introduction to regression and correlation. *NOTE See §200.7*

MATH 262 ***Advanced Calculus I*** (3 credits)
Prerequisite: CEGEP Mathematics 105; CEGEP Mathematics 203, or equivalent. Geometry of curves and surfaces, functions of several variables, partial derivatives, chain rule, tangent planes, extrema, Lagrange multipliers, Jacobians of transformations and multiple integrals, infinite series, power series and Taylor series.

MATH 263 ***Advanced Calculus II*** (3 credits)
Prerequisite: MATH 262, or equivalent. Functions from R^m to R^n, transformations between different coordinate systems, line integrals, Green's theorem, potentials and vector fields, divergence and curl, conservative fields, exact differentials, surface integrals, Gauss' and Stokes' theorems, applications.

MATH 271 ***Differential Equations I*** (3 credits)
Prerequisite: CEGEP Mathematics 105; CEGEP Mathematics 203. Separable equations, exact equations, integrating factors, force fields, first-order linear equations, input-output concept, second-order equations, reduction of order, variation of parameters, nth-order linear equations with constant coefficients, Laplace transforms, block diagrams and signal-flow graphs.

MATH 282 ***Linear Algebra I*** (3 credits)
Prerequisite: CEGEP Mathematics 105, or equivalent. Systems of linear equations, vector spaces, bases and dimension, linear transformations and matrix representation, rank, determinants, eigenvalues and eigenvectors.

MATH 283 ***Linear Algebra II*** (3 credits)
Prerequisite: MATH 282, or equivalent. Diagonalization, minimal polynomial, canonical forms, Cayley-Hamilton theorem, inner product and orthogonality, isometries, perturbations, quadratic forms.

MATH 290 ***Algebraic Systems (Introduction)*** (3 credits)
Prerequisite: Collegial pre-Science Mathematics profile or equivalent. Sets, functions, binary operations, examples of number systems, polynomial functions, divisibility, definitions and examples of groups and subgroups, fields.

MATH 298 ***Selected Topics in Mathematics*** (3 credits)

MATH 299 ***Selected Topics in Mathematics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

MATH 310 ***Mathematics for the Biological Sciences II*** (3 credits)
Prerequisite: MATH 210, or equivalent. Continuous probability, stochastic processes, population models, systems of linear difference and differential equations, Laplace transforms, signal-flow graphs, systems trajectories, stability, applications to ecology and biology.

MATH 311 ***An Introduction to Numerical Analysis*** (3 credits)
Prerequisite: CEGEP Mathematics 105; CEGEP Mathematics 203, or equivalent; MATH 232 or equivalent. Error analysis and computer arithmetic. Numerical solution of non-linear equations, fixed point iterations, rate of convergence. Interpolations and approximations, Lagrange polynomials, divided differences, discrete least-square approximation, Legendre polynomials. Numerical integration, Newton-Cotes formulas, Romberg integration.
NOTE: Only 3 credits will be granted from MATH 311 and COMP 361.

MATH 312 ***Numerical Analysis*** (3 credits)
Prerequisite: MATH 311 or COMP 361 or equivalent; MATH 263; MATH 283 or equivalent. Linear Systems: Cholesky decomposition for positive definite systems; tridiagonal case. Orthogonal factorizations: Householder matrices, least-square solutions for overdetermined systems. Data fitting: piecewise, splines, continuous least-squares. Quadrature: infinite intervals, orthogonal polynomials, Gaussian quadrature. Differential equations: systems of ODE's, predictor-corrector formula, stability, error analysis. Eigenvalue problem: Bisection, deflation, tridiagonalization, inverse iteration.

MATH 322 ***Mathematical Logic*** (3 credits)
Prerequisite: Eighteen credits in post-Collegial Mathematics. This course deals with the mathematical ideas and techniques required to state and prove one of the most spectacular theorems of modern mathematics: Godel's incompleteness theorem establishing the non-algorithmic nature of Arithmetic and, hence, of most of higher mathematics. The subject involves the study of formal languages and recursive functions and is suitable for students interested in computer science.

MATH 326 ***Theory of Interest*** (3 credits)
Prerequisite: MATH 262; MATH 282 previously or concurrently, and permission of the Department. Measurement of interest; annuities, amortization, schedules and sinking funds; bonds and securities; capital cost and depletion; life insurance.

MATH 327 ***Life Contingencies I*** (3 credits)
Prerequisite: MATH 326. Measurement of Mortality: survival function, mortality tables, force of mortality; special topics.

MATH 329 ***Workshop in Actuarial Mathematics II*** (2 credits)
Prerequisite: MATH 243, or permission of the Department. This workshop is intended to prepare students for the Probability and Statistics Examination of the Society of Actuaries and the Casualty Actuarial Society.

MATH 332 ***Introduction to Game Theory*** (3 credits)
Prerequisite: Eighteen credits in post-Collegial Mathematics. Matrix games. Strategies. Optimum strategies and the value of a game. Strictly determined games, Non-strictly determined games and linear programming. Applications. Further material according to interest of instructor and students.

MATH 334 ***Combinatorics*** (3 credits)
Prerequisite: Eighteen credits in post-collegial mathematics. General principle of counting, permutations, combinations, identities, generating functions; Fibonacci numbers; partitions, recurrence relations, Stirling numbers, Catalan numbers, principle of inclusion-exclusion, cycles of a permutation, orbits of permutation groups, parity of a permutation, Polya's theorem.

MATH 336 ***Linear Programming*** (3 credits)
Prerequisite: MATH 231; MATH 283. Convex sets and convex functions, polyhedral sets and cones, degeneracy and cycling, the revised Simplex method, sensitivity and parametric analysis, the transportation and assignment problems, minimal cost network flows, maximal flow problems; integer programming.

MATH 337 ***Introduction to Stochastic Methods of Operations Research*** (3 credits)
Prerequisite: MATH 231; MATH 243. Random variables, distributions, conditional probability, conditional expectations; Markov decision process and applications; inventory theory; applications in queueing systems.
NOTE: Students who have received credit for DESC 314 may not take this course for credit.

MATH 342 ***Quality Control and Industrial Statistics*** (3 credits)
Prerequisite: MATH 243 or permission of the Department. Concepts of statistical control; X, R, P, and C charts; acceptance-sampling inspection, continuous-sampling plans, reliability and life tests.

MATH 343 ***Sample Surveys*** (3 credits)
Prerequisite: MATH 243 or permission of the Department. Simple random sampling, stratified random sampling, systematic sampling, multi-stage sampling, regression and ratio estimates, non-sampling errors.

MATH 347 ***Non-Parametric Statistical Methods*** (3 credits)
Prerequisite: MATH 243. Chi-square and Kolmogorov-Smirnov Goodness-of-Fit tests, the sign, rank, and Mann-Whitney Wilcoxon tests for one and two samples, Kruskal-Wallis tests for k-samples, rank correlation and Kendall's TAU statistics, computer packages.

MATH 348 ***Regression and Correlation*** (3 credits)
Prerequisite: MATH 243. Simple, multiple and polynomial regression, least square estimations, Gauss-Markov theorem; analysis of residuals; analysis of binary data; multi-collinearity, auto-correlation models; step-wise regression; multivariate normal distributions and correlation analysis.

MATH 351 ***Concepts of Probability*** (3 credits)
Prerequisite: MATH 243. Axiomatic approach to probability, combinatorial probability, discrete and continuous random variables, geometric probability, expectation, conditional probability and conditional expectations, introduction to Markov chains and the Poisson process.

MATH 353 ***Stochastic Processes and Applications*** (3 credits)
Prerequisite: MATH 351. Continuous stochastic processes. Poisson processes, continuous-time Markov processes, queuing models, birth and death processes, renewal theory and reliability of systems.

MATH 362 ***Introduction to Analysis I*** (3 credits)
Prerequisite: MATH 263; MATH 283. The real number system, least upper bounds. Limits, continuity. Differentiation and integration. The Fundamental Theorem of the integral Calculus.

MATH 363 ***Introduction to Analysis II*** (3 credits)
Prerequisite: MATH 362. Convex functions. Inverse functions. Taylor polynomials. Sequences, series of functions, uniform convergence. Real and complex power series. Cardinality.

MATH 366 ***Complex Analysis I*** (3 credits)
Prerequisite: MATH 263. Algebra and geometry of complex numbers, linear transformations, analytic functions, Laurent's series, calculus of residues, special functions.

MATH 371 ***Differential Equations II*** (3 credits)
Prerequisite: MATH 263; MATH 271; MATH 283. Numerical methods for ordinary differential equations, relation-to-existence theorem, solution-in-power series. Partial differential equations, separation of variables, Fourier series, diffusion equation, wave equation, Laplace's equation, Schrodinger's equation. Separation of variables leading to further applications of power-series method. Physical illustrations and problems.

MATH 373 ***Qualitative Theory of Differential Equations*** (3 credits)
Prerequisite: MATH 263; MATH 271; MATH 283. Systems of linear differential equations. Fundamental matrices. Nonhomogeneous linear systems. Non-linear systems. Solutions and trajectories. The phase plane. Stability concepts. Liapunov's second method. Periodic solutions and limit cycles. Introduction to Boundary-value problems and Sturm-Liouville theory.

MATH 380 ***Differential Geometry I*** (3 credits)
Prerequisite: MATH 263; MATH 271; MATH 283. Calculus on Euclidean space, tangent vectors, directional derivatives, differential forms, mappings, curves, frame fields, Serret-Frenet formulas, covariant derivatives; Calculus on a surface, tangent spaces, differential forms on a surface, mappings between surfaces, integration of forms, Stokes' Theorem.

MATH 381 ***Linear Algebra III*** (3 credits)
Prerequisite: MATH 283. Matrices, linear transformations, determinants, metric concepts, inner-product spaces, dual spaces, spectral theorem, bilinear and quadratic forms, canonical forms for linear transformations, matrix functions, selected topics.

MATH 392 ***Elementary Number Theory*** (3 credits)
Prerequisite: Eighteen credits in post-Collegial Mathematics. Number systems, division and factorization, number-theoretic functions, congruences, algebraic congruences and primitive roots, quadratic residues, diophantine equations.

MATH 393 ***Algebraic Systems I*** (3 credits)
Prerequisite: Twelve credits in post-Collegial Mathematics, or permission of the Department. Introduction to algebraic systems: groups, rings, fields, homomorphisms.

MATH 394 ***Algebraic Systems II*** (3 credits)
Prerequisite: MATH 393, or equivalent. Normal subgroups, quotient groups, iso-morphism theorems, polynomial rings, principal ideal rings, elementary field theory.

MATH 397 ***History of Mathematics*** (3 credits)
Prerequisite: MATH 263; MATH 283, or permission of the Department. Early mathematics, Greek mathematics, European mathematics in the Middle Ages, the origin and development of analytic geometry and calculus, mathematics as free creation, the generality of mathematics in the twentieth century.

MATH 398 ***Selected Topics in Mathematics*** (3 credits)

MATH 399 ***Selected Topics in Mathematics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

MATH 427 ***Life Contingencies II*** (3 credits)
Prerequisite: MATH 327. Life annuities; pure endowments, annual payments, continuous annuities, net annual premium, net level premium reserves; the expense factor; special topics.

MATH 428 ***Life Contingencies III*** (3 credits)
Prerequisite: MATH 427. Applications of Contingency Theory in areas of Life and Health Insurance, Annuities and Pension; individual risk theory, ruin theory.

MATH 429 ***Workshop in Actuarial Mathematics III*** (2 credits)
Prerequisite: MATH 327 or permission of the Department. This workshop reviews and consolidates the material from other courses in the programme of the Actuarial Society's Examination on Life Contingencies.

MATH 432 ***Theory of Graphs and Networks*** (3 credits)
Prerequisite: Permission of the Department. Directed and undirected graphs. Partitions, planar graphs, matrix representation, applications to network theory.

MATH 433 ***Calculus of Variations*** (3 credits)
Prerequisite: MATH 373. Nature of problems, Weak variations, the first variation, Euler's equation. The second variation, Jacobi's equation, Legendre's test, conjugate points. Relative maxima and minima, isoperimetrical problems. Integrals with variable end points. Applications to problems in pure and applied mathematics; the principle of least action. Strong variations, the Weierstrass E-function.

MATH 435 ***Advanced Numerical Analysis*** (3 credits)
Prerequisite: MATH 311; MATH 312. Advanced problems and techniques in numerical linear algebra, systems of non-linear equations, roots of polynomials, spline fitting, mini-max fitting, extrapolation techniques, solution of initial value problems in ordinary differential equations, solution of two-point boundary value problems in ordinary differential equations, elliptic partial differential equations, finite difference and finite element methods for hyperbolic and parabolic partial differential equations.

MATH 436 ***Non-Linear Programming*** (3 credits)
Prerequisite: MATH 336 or permission of the Department. Classical methods of optimization, Lagrange multipliers, Kuhn-Tucker conditions; line search methods, quadratic programming, gradient methods. Introduction to dynamic programming.

MATH 437 ***Applied Stochastic Models in Operations Research*** (3 credits)
Prerequisite: MATH 337 or MATH 351. Dynamic programming, renewal theory and applications, system reliability; simulation and Monte-Carlo technique; network analysis.

MATH 443 ***Time Series and Forecasting*** (3 credits)
Prerequisite: MATH 348. Time Series, forecasting by trend and irregular components (using multiple regression analysis and exponential smoothing); forecasting seasonal time series, additive and multiplicative decomposition methods, Box-Jenkins methodology, moving average, autoregressive and mixed models. Standard computer packages are used.
NOTE: Students who have received credit for DESC 447 may not take this course for credit.

MATH 445 ***Applied Statistics*** (3 credits)
Prerequisite: MATH 348; MATH 351 or permission of the Department. The course contents are chosen from: sequential procedures; multivariate analysis; time series; reliability; advanced design of experiments; estimations and testing of hypothesis.

MATH 448 ***Analysis of Variance*** (3 credits)
Prerequisite: MATH 348. Single and multiple factor analysis of variance (ANOVA); fixed, random and mixed effects models; multiple comparison; determination of sample size; nonparametric procedures.

MATH 451 ***Advanced Probability*** (3 credits)
Prerequisite: MATH 351. Markov Chains, occupancy and matching problems, characteristic functions and moment-generating functions, central limit theorem and weak law of large numbers, probability generating functions and applications to combinatorial problems, random walk and the reflection principle, branching processes.

MATH 454 ***Mathematical Statistics*** (3 credits)
Prerequisite: MATH 351. Multivariate distributions, derivation of distributions using transformation method; standard sampling distributions, order statistics, descriptive and inferential statistics; estimation, properties of estimators, Rao-Cramer Inequality, Rao-Blackwell Theorem; maximum likelihood and method of moments estimators; tests of hypotheses, Neyman-Pearson Theory, likelihood ratio tests and their properties.

MATH 464 ***Real Analysis*** (3 credits)
Prerequisite: MATH 363. Metric spaces; function spaces; compactness, completeness, fixed-point theorems, Ascoli-Arzela theorem, Weierstrass approximation theorem.

MATH 466 ***Complex Analysis II*** (3 credits)
Prerequisite: MATH 363; MATH 366. Cauchy's theorem, singularities, maximum modulus principle, uniqueness theorem, normal families, Riemann mapping theorem.

MATH 467 ***Measure and Integration*** (3 credits)
Prerequisite: MATH 363. Lebesque measure and integration on the real line, convergence theorems, absolute continuity, completeness of $L^2(0,1)$.

MATH 471 ***Partial Differential Equations*** (3 credits)
Prerequisite: MATH 371 or MATH 373. Classification of partial differential equations, the Cauchy-Kowalewski theorem, characteristics, boundary value and eigenvalue problems for elliptic equations, initial value and initial boundary value problems for parabolic and hyperbolic equations.

MATH 472 ***Linear Systems*** (3 credits)
Prerequisite: MATH 283; MATH 371, or MATH 373. State-space analysis and design of continuous and discrete systems. Controllability and observability, modal control, pole-displacement techniques. Luenberger observers, Liapunov stability.

MATH 473 ***Stability Theory of Differential Equations*** (3 credits)
Prerequisite: MATH 373. Existence and uniqueness of solutions of nonlinear differential equations. Properties of solutions. Linear systems. Asymptotic behaviour of linear systems. Stability in nonlinear systems. Linearization. Liapunov functions. Two dimensional systems. Limit cycles.

MATH 474 ***Introduction to Mathematical Control Theory*** (3 credits)
Prerequisite: MATH 363; MATH 472. Linear control systems. Attainable sets; compactness, convexity, continuity in time. Controllability and observability. Time optimal control. Maximum principle. Examples of physical systems. Switching curves. Optimal control with quadratic cost.

MATH 480 ***Differential Geometry II*** (3 credits)
Prerequisite: MATH 380. Connection forms, structural equations of Cartan, topological properties of surfaces, shape operators for surfaces, curvature, isometries, intrinsic geometry of surfaces, integration and orientation, congruence; Riemannian geometry, geometric surfaces, curvature, geodesics, Gauss-Bonnet theorem.

MATH 491 ***Abstract Algebra I*** (3 credits)
Prerequisite: MATH 394, or equivalent. Sylow theorems, composition series, ideal theory of rings, noetherian rings, modules.

MATH 492 ***Abstract Algebra II*** (3 credits)
Prerequisite: MATH 491, or equivalent. Elements of field and Galois theory, including straight-edge-and-compass construction and the unsolvability of equations of fifth degree.

MATH 496 ***Mathematical Thinking*** (3 credits)
Prerequisite: Permission of the Department. This course is intended to stimulate the students' mathematical creativity and to improve their ability to think systematically, analyze problems, and communicate their reasoning. Students participate actively in discussing and solving problems drawn from a variety of sources (including previous Putnam competitions) and are expected to explain their thinking both orally and in writing. Discussions include the following topics: problem posing, Polya's techniques of problem solving; equivalence and similarity of problems; generalization; applications. The problems are selected from: combinatorics, geometry, group theory, number theory, real analysis, etc.
NOTE: Students who have received credit for MATH 499 may not take this course for credit.

MATH 498 ***Advanced Topics in Mathematics*** (3 credits)

MATH 499 ***Advanced Topics in Mathematics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.210 Modern Languages and Linguistics

Chair
ANTONIO PLANELLS, *Professor (Spanish)*

Professors
FRANCISCO ANTOLIN *(Spanish)*
CARLO FONDA *(Linguistics)*

Associate Professors
CHARLES R. BARTON *(Linguistics)*
ANTHONY COSTANZO *(Italian)*
HELMUT FAMIRA *(German)*
JOHN D. GRAYSON *(Spanish and Linguistics)*
ANNA MARIE KETTER *(German)*
JOSEPH A. MACALUSO *(Spanish, Italian, Supervisor of Hebrew)*
HERFRIED SCHEER *(German)*

Assistant Professors
FILIPPO SALVATORE *(Italian)*
ANNETTE TEFFETELLER *(Linguistics)*
BRUNO VILLATA *(Italian)*

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
All these programmes can normally be completed within the regular three-year University sessions.

60 BA Honours in German
Students entering the programme are required to have a basic knowledge of German. GERM 250 and higher level courses may be chosen. Upon consultation with the Department, advanced students are not required to take any of the courses under 300.

60 BA Honours in Italian
6 ITAL 210^6
6 ITAL 250^6, 252^6
12 ITAL 300^6, 310^3, 311^3
36 credits in an approved sequence chosen from any of the following
ITAL 305^6, 360^6, 398^3, 399^6, 410^3, 415^3, 416^3, 420^3, 421^3, 425^3, 430^3, 432^3, 433^3, 435^3, 436^3, 437^3, 439^3, 442^3, 443^3, 445^3, 446^3, 460^3, 480^3, 481^3, 482^3, 483^3, 498^3, 499^6

NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under ITAL 300.

60 BA Honours in Spanish
6 SPAN 250^6
3 SPAN 301^3
3 SPAN 302^3
48 credits in an approved sequence chosen from any of the following
SPAN 303^3, 310^3, 311^3, 320^3, 321^3, 398^3, 399^6, 406^3, 407^3, 411^3, 412^3, 413^3, 416^3, 417^3, 420^3, 431^3, 432^3, 441^3, 442^3, 451^3, 498^3, 499^6

NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under SPAN 301.

36 BA Major in German
A student entering this programme may have, but does not need to have, "a basic knowledge of the language". GERM 250 and higher level courses may be chosen. Upon consultation with the Department, advanced students are not required to take any of the courses under 300.

42 BA Major in Italian
6 ITAL 210^6
6 ITAL 250^6, 252^6
12 ITAL 300^6, 310^3, 311^3
18 credits in Italian at the 300 level or higher in a sequence approved by the Department.

NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under ITAL 300.

48 BA Major in Spanish
6 SPAN 250^6
3 SPAN 301^3
3 SPAN 302^3
36 credits in approved sequence chosen from *one* of the following options:
Literature Option:
303^3, 310^3, 311^3, 320^3, 321^3, 406^3, 407^3, 411^3, 412^3, 413^3, 416^3, 417^3, 420^3, 431^6, 432^6, 441^3, 442^3, 451^3
Language Option:
255^6, 305^6, 360^6, 361^6, LING 200^6, LING 441^{6*} or six additional credits approved by the Department

**Students who have received credit for SPAN 465 prior to 1986-87 may not take this course for credit.*
NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under SPAN 301.

30 Minor in German
A student entering this programme will select any German courses in consultation with the Department.

30 Minor in Italian

12 ITAL 210[6], 250[6]

18 credits in Italian at the 300 level or higher

NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under ITAL 300.

30 Minor in Spanish

30 Spanish courses; SPAN 210 or higher chosen in consultation with the Department

NOTE: Upon consultation with the Department, advanced students may not be required to do any courses under SPAN 301.

LINGUISTICS

The Department offers an Honours, a Major, and a Minor programme in Linguistics.

60 BA Honours in Linguistics

A student entering an Honours programme in Linguistics will normally take the following courses:

12 LING 200[6], 312[6]

6 LING 400[3], 401[3]

18 Chosen from LING 320[3], 321[3], 372[3], 373[3], 421[6], 431[6]

12 LING credits chosen at the "300" or "400" level

12 credits in Linguistics or 12 credits chosen in consultation with the Department from the following: Latin, Greek, Hebrew, Russian, German, Spanish, Italian, French, English, TESL, Sociology, Philosophy, Psychology, Portuguese

42 BA Major in Linguistics

6 LING 200[6]

18 LING 312[6], 372[3], 373[3], 400[3], 401[3]

12 LING credits chosen at the "300" and "400" level, in consultation with the Department

6 Elective LING or 6 credits chosen in consultation with the Department

30 Minor in Linguistics

6 LING 200[6]

24 credits in Linguistics

Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

NOTE: "A/B" and "B" 200-level courses. The second-term content of 6-credit language courses designated "A/B" is identical to that of 3-credit courses, with the same title, labelled "B". The "A/B" courses are designed to permit less advanced students to reach the level of students taking only the "B" course. Students in "A/B" courses may not withdraw after completing the fall term and receive credit.

Written work may be required in the language being studied for these courses; please consult with the Department.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

German

GERM 210 ***Introductory Course in German A/B*** (6 credits)

A beginners' course in the German language, designed to make the student conversant with the grammar, pronunciation, and ordinary vocabulary. Equal emphasis placed on speaking and understanding, reading and writing. May be taken concurrently with GERM 220 and/or GERM 235. Lectures and laboratory.

GERM 211 ***Introductory Course in German B*** (3 credits)

Prerequisite: Permission of the Department. This course is equivalent to the second term of GERM 210. It is designed for students who have taken some German at the CEGEP level, or equivalent. May be taken concurrently with GERM 221 and/or GERM 235. Lectures and laboratory.

NOTE: Students who have received credit for GERM 210 may not take this course for credit.

GERM 220 ***Introduction to German Studies A/B*** (6 credits)

An introductory language course, which develops all basic skills. Emphasis on the audio-lingual approach; i.e., on speaking and understanding. May be taken concurrently with GERM 210 and/or GERM 235. Lectures and laboratory.

GERM 221 ***Introduction to German Studies B*** (3 credits)

Prerequisite: Permission of the Department. This course is equivalent to the second term of GERM 220. It is designed for students who have taken some German at the CEGEP level, or equivalent. May be taken concurrently with GERM 211 and/or GERM 235. Lectures and laboratory.

NOTE: Students who have received credit for GERM 220 may not take this course for credit.

GERM 235 ***Translation I*** (6 credits)

This course gives the student sufficient training to read German and to translate from German into English with reasonable competence. No previous knowledge of German required. Texts include a variety of reading materials of current interest.

NOTE: This course alone may not be used as a prerequisite for advanced courses in German.

GERM 250 ***Intermediate German A/B*** (6 credits)

Prerequisite: GERM 210 or GERM 220, or equivalent. Advanced instruction in the language. Emphasis upon idiom, and usage in conversation and composition. Readings from German authors and other texts. Lectures and laboratory.

GERM 251 ***Intermediate German B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of GERM 250. It is designed for students who have taken at least four semesters of German at the CEGEP level or equivalent. May be taken concurrently with GERM 255.
NOTE: Students who have received credit for GERM 250 may not take this course for credit.

GERM 255 ***Translation II*** (6 credits)
Prerequisite: GERM 210 or GERM 220, or equivalent. This course is a continuation of Translation I and presents more complicated problems of translation from German into English. It is also an introduction to the basic skills required to translate English into German.

GERM 260 ***German Culture*** (6 credits)
Prerequisite: GERM 210 or equivalent or permission of the Department. This is a course designed to develop the speaking ability of the student. The topic of the course is an introduction into the cultural heritage of the German-speaking people.

GERM 298 ***Selected Topics in German*** (3 credits)

GERM 299 ***Selected Topics in German*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

GERM 300 ***Advanced Composition and Stylistics*** (6 credits)
Prerequisite: GERM 250 or GERM 255, or equivalent. This course is intended to give the student increased fluency in and a firmer command of the language. The emphasis of the course is on stylistics and composition.

GERM 305 ***Translation III*** (6 credits)
Prerequisite: GERM 255, or equivalent. This course is a continuation of Translation II and deals with advanced problems and techniques of translating from English into German.

GERM 345 ***Germany and Austria in Modern Times*** (6 credits)
Socio-economic change and the development of nation-states in German Central Europe from the eighteenth century to the present.

GERM 360 ***German Civilization*** (6 credits)
Prerequisite: GERM 250 or GERM 255 or equivalent. This course is designed to acquaint the student with the intellectual and cultural history of German-speaking nations as reflected in their writers.

GERM 398 ***Selected Topics in German*** (3 credits)

GERM 399 ***Selected Topics in German*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ALL COURSES WITH NUMBERS 400 AND HIGHER ARE CONDUCTED IN GERMAN

GERM 400 ***Survey of German Literature 800 to 1600*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A survey of Old High German, Middle High German, and Early New High German literature.

GERM 405 ***German Literature from 1600 to 1750*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A detailed study of representative writers of the German Baroque, Rococo, and Enlightenment periods.

GERM 410 ***Literature of the Classic Period*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. Pre-classic and classic German literature, with its philosophical background.

GERM 415 ***Literature of the Romantic Period*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. Romanticism as a universal attitude. The works of the major German Romanticists and their influence.

GERM 420 ***German Literature of the Nineteenth Century*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A study of representative works of post-romantic authors and the writers of German Realism.

GERM 425 ***German Literature from 1880 to 1930*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. The development of German literature from Naturalism to the beginnings of Hitler-Germany.

GERM 430 ***Contemporary German Literature*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. Literature in Hitler-Germany, German emigrant literature, and post-war literature.

GERM 435 ***History of the German Drama*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A study of German drama from its beginnings to modern times.

GERM 440 ***A Study of the Deutsche Novelle*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A study of the Deutsche Novelle from Goethe to Kafka.

GERM 450 ***German Poetry from the Middle Ages to Modern Times*** (3 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. A survey of German poetry through the centuries. Outstanding examples of representative poets are studied in detail.

GERM 465 ***History of the German Language*** (6 credits)
Prerequisite: GERM 250 or equivalent, or permission of the Department. The development of the language up to Old High German is sketched in rough outlines. On the basis of literary works, the development from Old High German to Middle High German, Early New High German and our Standard German is studied.
NOTE: This course may be taken for credit in a Linguistics programme.

GERM 480 ***Tutorial I*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in German language and/or literature, and at least two major assignments to meet the student's individual needs.

GERM 481 ***Tutorial II*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in German language and/or literature. Written and oral criticism of the works studied.

GERM 482 ***Tutorial III*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in German language and/or literature, and at least two major assignments to meet the student's individual needs.
NOTE: Students who have received credit for GERM 480 may register for GERM 482, provided the subject matter is different.

GERM 483 ***Tutorial IV*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in German language and/or literature. Written and oral criticism of the works studied.
NOTE: Students who have received credit for GERM 481 may register for GERM 483, provided the subject matter is different.

GERM 498 ***Advanced Topics in German*** (3 credits)

GERM 499 ***Advanced Topics in German*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

Hebrew

HEBR 210 ***Introductory Course in Hebrew A/B*** (6 credits)
A beginners' course in Hebrew, spoken and written, with reading of classical and modern texts. Lectures and laboratory.
NOTE: Students who have credits for CEGEP Hebrew 301 or 401, or whose schooling has been conducted in Hebrew, will not be admitted to this course.

HEBR 211 ***Introductory Course in Hebrew B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of HEBR 210. It is designed for students who have taken some Hebrew at the CEGEP level or equivalent.
NOTE: Students who have received credit for HEBR 210 may not take this course for credit.

HEBR 250 ***Intermediate Hebrew A/B*** (6 credits)
Prerequisite: HEBR 210, or two to three years of high school Hebrew or equivalent. This course consists of a complete review of Hebrew grammar and syntax, with special emphasis on modern Hebrew usage, readings in the Bible, and an introduction to modern Hebrew literature. Lectures and laboratory.

HEBR 251 ***Intermediate Hebrew B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of HEBR 250. It is designed for students who have taken two to three years of high school Hebrew or equivalent. Lectures and laboratory.
NOTE: Students who have received credit for HEBR 250 may not take this course for credit.

Italian

ITAL 210 ***Introductory Course in Italian A/B*** (6 credits)
A beginners' course in the Italian language, designed to make the student conversant with the grammar, pronunciation, and ordinary vocabulary. Equal emphasis is placed on speaking and understanding, reading and writing. Lectures and laboratory.

ITAL 211 ***Introductory Course in Italian B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of ITAL 210. It is designed for students who have taken some Italian at the CEGEP level, or equivalent. Lectures and laboratory.
NOTE: Students who have received credit for ITAL 210 may not take this course for credit.

ITAL 250 ***Intermediate Italian A/B*** (6 credits)
Prerequisite: ITAL 210 or equivalent. Advanced instruction in the language. Emphasis upon idiom and usage in conversation and composition. Readings from Italian authors and other texts. Lectures and laboratory.

ITAL 251 ***Intermediate Italian B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of ITAL 250. It is designed for students who have taken at least four semesters of Italian at the CEGEP level or equivalent.
NOTE: Students who have received credit for ITAL 250 may not take this course for credit.

ITAL 252 ***Corrective Italian*** (6 credits)
A course for speakers of Italian or Italian dialects who need a basic training in "Standard" Italian. Emphasis is placed on grammar, lexicon, sentence structure and other fundamentals of good usage. Both oral and written expression are emphasized.

ITAL 255 ***Translation*** (6 credits)
Prerequisite: ITAL 210 or equivalent. This course presents problems of translation from Italian into English and from English into Italian.

ITAL 298 ***Selected Topics in Italian*** (3 credits)

ITAL 299 ***Selected Topics in Italian*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ITAL 300 ***Advanced Composition and Stylistics*** (6 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. This course is intended to give the student increased fluency in and a firmer command of the language. The emphasis of the course is on stylistics and composition.

ITAL 305 ***Advanced Translation*** (6 credits)
Prerequisite: ITAL 255 or equivalent. This course is a continuation of Translation II and deals with advanced problems and techniques of translation from Italian into English and from English into Italian.

ITAL 310 ***Survey of Italian Literature I*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255 or ITAL 252. A study of the major authors and trends of Italian literature from its origins to the end of the sixteenth century. Conducted in Italian.
NOTE: Students who have received credit for ITAL 400 may not take this course for credit.

ITAL 311 ***Survey of Italian Literature II*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255 or ITAL 252 or permission of the Department. A study of the major authors and trends of Italian literature from the beginning of the seventeenth century to the present. Conducted in Italian.
NOTE: Students who have received credit for ITAL 401 may not take this course for credit.

ITAL 350 ***Literature in Translation*** (6 credits)
A study of representative works of Italian literature. All readings and lectures are in English.

ITAL 360 ***Italian Civilization*** (6 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A survey of Italy's cultural and scientific achievements. Attention is given to Italy's social, political, and economic life.

ITAL 398 ***Selected Topics in Italian*** (3 credits)

ITAL 399 ***Selected Topics in Italian*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ALL COURSES NUMBERED 400 AND HIGHER ARE CONDUCTED IN ITALIAN.

ITAL 410 ***Literary Criticism*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A survey of literary criticism from the Renaissance to the present. Readings from the critical works of Vico, Foscolo and De Sanctis, Croce. Critical theories and trends of modern Italian criticism. Lectures: 3 hours per week.

ITAL 415 ***Dante*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A study of Dante's minor works. Introduction to the *Divina commedia*. Lectures: 3 hours per week.

ITAL 416 ***"Divina commedia"*** (3 credits)
Prerequisite: ITAL 415 or permission of the Department. Analysis of the *Divina commedia*. Lectures: 3 hours per week.

ITAL 420 ***Petrarch and Early Italian Poetry*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A study of poetic works from the poets of the *Scuola siciliana* and the *Dolce stil nuovo*. Emphasis on Petrarch's *Canzoniere*. Lectures: 3 hours per week.

ITAL 421 ***Boccaccio and the Novella*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. Origin and evolution of the early Italian novella. Emphasis on the *Decameron*. Lectures: 3 hours per week.

ITAL 425 ***Fifteenth-Century Prose and Poetry*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. The rise of Humanism in Italy. A study of representative prose writings of fifteenth-century authors, and a study of the epic and lyric poetry of the fifteenth century: chivalresque poetry in Italy, the lyric poetry of Poliziano and Lorenzo de' Medici. Lectures: 3 hours per week.

ITAL 430 ***The Italian Renaissance*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A study of the Italian Renaissance, with emphasis on Machiavelli's *Principe* and *La mandragola*. Lectures: 3 hours per week.

ITAL 432 ***Ariosto*** (3 credits)
Prerequisite: ITAL 250 or ITAL 252 or ITAL 255, or equivalent. A study of *Orlando Furioso* and minor works of Ariosto. Conducted in Italian.
NOTE: Students who have received credit for ITAL 431 may not take this course for credit.

ITAL 433 ***Tasso and Epic Poetry*** (3 credits)
Prerequisite: ITAL 250 or ITAL 252 or ITAL 255, or equivalent. A study of *La Gerusalemme liberata* within the context of Counter-Reformation Italy. Tasso's contribution to the pastoral genre (*Aminta*). Conducted in Italian.
NOTE: Students who have received credit for ITAL 431 may not take this course for credit.

ITAL 435 ***Seventeenth Century (Poetry and Prose)*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A study of representative scientific and literary texts. Emphasis on Galileo, Sarpi, Marino, Chiabrera. Conducted in Italian.

ITAL 436 ***Eighteenth Century (Poetry and Prose)*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. A study of philosophic and literary texts. Emphasis on Vico, Parini, Alfieri. Conducted in Italian.

ITAL 437 ***Goldoni and the Development of Italian Theatre*** (3 credits)
Prerequisite: ITAL 250 or ITAL 252 or ITAL 255, or equivalent. A study of Italian theatre from its origins to the age of Goldoni. Conducted in Italian.
NOTE: Students who have received credit for ITAL 405 may not take this course for credit.

ITAL 439 ***Romanticism in Italy: The Early Nineteenth Century*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255 or ITAL 252 or permission of the Department. The debate between neo-classicism and romanticism. Links between romanticism and the Risogimento. Emphasis on Monti, Foscolo, and Leopardi. Conducted in Italian.

ITAL 442 ***Manzoni*** (3 credits)
Prerequisite: ITAL 250 or ITAL 252 or ITAL 255, or equivalent. A study of *I Promessi Sposi* and representative poetic and dramatic works of Manzoni. Conducted in Italian.
NOTE: Students who have received credit for ITAL 440 or 441 may not take this course for credit.

ITAL 443 ***Nineteenth-Century Italian Literature after Manzoni*** (3 credits)
Prerequisite: ITAL 250 or ITAL 252 or ITAL 255, or equivalent. Analysis of representative literary works with emphasis on Verga, Carducci and Pascoli. Conducted in Italian.
NOTE: Students who have received credit for ITAL 440 or 441 may not take this course for credit.

ITAL 445 ***Twentieth-Century Italian Literature to 1945*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. The major literary trends in Italy from the beginning of the twentieth century to 1945. Emphasis on D'Annunzio, Pirandello, Ungaretti and Montale. Conducted in Italian.

ITAL 446 ***Italian Literature from Neorealism to the Present*** (3 credits)
Prerequisite: ITAL 250 or ITAL 255, or equivalent. Representative literary works from the end of World War II to the present. Conducted in Italian.

ITAL 460 ***History of the Italian Language*** (6 credits)
Prerequisite: ITAL 250 or ITAL 255 or ITAL 252 or permission of the Department. A study of the history of the Italian language from its origins to the present day through the study and analysis of representative texts. Some attention is given to the Romance languages and Italian dialects. Conducted in Italian.

ITAL 480 ***Tutorial I*** (3 credits)
Prerequisite: Permission of the Department. A course designed to meet the individual needs of advanced students. Guided readings in Italian language and/or literature. Written and oral criticism of the works studied.

ITAL 481 ***Tutorial II*** (3 credits)
Prerequisite: Permission of the Department. A course designed to meet the individual needs of advanced students. Guided readings in Italian language and/or literature. Written and oral criticism of the works studied.

ITAL 482 ***Tutorial III*** (3 credits)
Prerequisite: Permission of the Department. A course designed to meet the individual needs of advanced students. Guided readings in Italian language and/or literature. Written and oral criticism of the works studied.
NOTE: Students who have received credit for ITAL 480 may register for ITAL 482, provided the subject matter is different.

ITAL 483 ***Tutorial IV*** (3 credits)
Prerequisite: Permission of the Department. A course designed to meet the individual needs of advanced students. Guided readings in Italian language and/or literature. Written and oral criticism of the works studied.
NOTE: Students who have received credit for ITAL 481 may register for ITAL 483, provided the subject matter is different.

ITAL 498 ***Advanced Topics in Italian*** (3 credits)

ITAL 499 ***Advanced Topics in Italian*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

Linguistics

LING 200 ***Introduction to Linguistic Science*** (6 credits)
Introduction to the principles of general linguistics for beginners in the field. Basic phonology and morphology. Emphasis on synchronic linguistic analysis, with a brief examination of historical and comparative linguistics.

LING 298 ***Selected Topics in Linguistics*** (3 credits)

LING 299 ***Selected Topics in Linguistics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LING 300 ***Sociolinguistics I*** (3 credits)
Prerequisite: LING 200 or permission of the Department. A study of the beliefs, interrelationships and values of societal groups as reflected in language.

LING 301 ***Sociolinguistics II*** (3 credits)
Prerequisite: LING 300 or permission of the Department. A study of the role that linguistics plays in understanding human society. While this course continues the work of Sociolinguistics I, either LING 300 or LING 301, or both, may be taken for credit.

LING 312 ***Theory of Grammars*** (6 credits)
Prerequisite: LING 200 previously or concurrently, or permission of the Department. This course deals with the history and development of grammatical theory prior to Chomsky. Considerable emphasis is placed on traditional grammar, the school of de Saussure and Bloomfieldian structuralism. The principles of historical linguistics and the development of semantic theory and Meaning-Structure Grammar are also examined.
NOTE: Students who have received credit for LING 410 may not take this course for credit.

LING 320 ***Semantics I*** (3 credits)
Prerequisite: LING 200 or equivalent, or permission of the Department. Linguistic history of semantics. The emotive elements in name and sense. Central and contextual meaning, feeling, tone. Synonymy, homonymy, polysemy. Synchronic and diachronic semantics. Lectures: 3 hours per week.

LING 321 ***Semantics II*** (3 credits)
Prerequisite: LING 320, or permission of the Department. Theory of change. (Meillet, Wundt, Gustaf Sterne, Hans Sperber, Briel, Sturtevant). Classifications of changes of meaning: genetic, causal, functional. Changes of model and changes of syntax. The Port-Royal grammarians. Synesthesia and pseudosynesthesia. Panchronistic statistical laws. Lectures: 3 hours per week.

LING 360 ***Language and Thought I*** (3 credits)
Prerequisite: LING 200, or equivalent. Meaning and the structure of languages. Grammar, competence, and performance. Language and perception. Universals in linguistic theory. Lectures: 3 hours per week.

LING 361 ***Language and Thought II*** (3 credits)
Prerequisite: LING 360, or permission of the Department. Cognition and the development of language. The cognitive basis of language learning in infants. Linguistic relativism. The structure of the psychological lexicon. Psychological models of bilingualism. Computer and linguistic processes. Lectures: 3 hours per week.

LING 372 ***Descriptive and Instrumental Phonetics*** (3 credits)
Prerequisite: LING 200, or permission of the Department. Description of speech sounds in articulatory terms. Identification and description of sounds that occur outside the Indo-European family of languages. Description of speech sounds as to their acoustic qualities: frequency, amplitude, pitch, stress. Interpretation of sound spectrograms.
NOTE: Students who have received credit for LING 370 and 371 may not take this course for credit.

LING 373 ***Phonemic Analysis*** (3 credits)
Prerequisite: LING 200 and/or LING 372, or permission of the Department. The fundamentals of distinctive-feature analysis as developed by Jakobson, Chomsky, and Halle. Theoretical concepts and notational techniques are emphasized. Extensive training in data analysis and rule writing.
NOTE: Students who have received credit for LING 417 may not take this course for credit.

LING 398 ***Selected Topics in Linguistics*** (3 credits)

LING 399 ***Selected Topics in Linguistics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LING 400 ***Theory of Generative Grammar I*** (3 credits)
Prerequisite: LING 200 and LING 312. Chomsky's Extended Standard Theory. Phrase-markers and phrase-structure rules; x-bar syntax; the lexicon; WH-movement, *though*-movement, topicalization and VP-preposing.
NOTE: Students who have received credit for LING 411 may not take this course for credit.

LING 401 ***Theory of Generative Grammar II*** (3 credits)
Prerequisite: LING 400 or equivalent. Subject raising; reflexive interpretation; structure-preserving, trace and cyclic principles; constraints; fillers; the binding theory and current developments.
NOTE: Students who have received credit for LING 411 may not take this course for credit.

LING 421 ***Non-Indo-European Structures*** (6 credits)
Prerequisite: LING 200 either previously or concurrently, or permission of the Department. This course is intended to give the student an acquaintance in depth with the structures of several languages differing markedly in their nature from Indo-European. Possible areas of study might be Eskimo, Finnish, Japanese, Swahili, Turkish, some Amerindian or Malayo-Polynesian language, etc. As a general rule, only four languages are investigated in a particular year.

LING 431 ***Comparative Indo-European Linguistics*** (6 credits)
Prerequisite: LING 200, or permission of the Department. Through a comparative study of the phonology of the various branches of the Indo-European language family (Indo-Iranian, Hellenic, Italic, Germanic, Slavic, Baltic, etc.), this course familiarizes the student with the techniques used in linguistic reconstruction. Emphasis is given to the development and differentiation of languages through time.

LING 436 ***Advanced Indo-European Studies*** (3 credits)
Prerequisite: LING 431 previously or concurrently. Detailed study of the synchronic and diachronic grammar of an Indo-European dialect essential to the reconstruction of the protolanguage. Extensive readings are undertaken in both original texts and in scholarly contributions to their elucidation. Emphasis is placed on current issues and research in the field.

LING 437 ***Problems in Indo-European Comparative Grammar*** (3 credits)
Prerequisite: LING 431 previously or concurrently. This course explores one or more areas of Indo-European comparative grammar of particular interest in current research. Extensive reading in the

scholarly literature is undertaken with emphasis on the principles by which hypotheses in historical linguistics can be framed and the criteria for testing such hypotheses.

LING 441 ***Comparative Romance Linguistics*** (6 credits)
Prerequisite: LING 200 or permission of the Department. A study of the evolution of Classical into Vulgar Latin and its subsequent development into modern Romance dialects, such as Portuguese, Castilian, Catalan, Occitanian, French, Italian, Rumansch, Romanian, etc.

LING 451 ***Modern Literary Arabic*** (6 credits)
Prerequisite: LING 200 or equivalent or permission of the Department. A one-year course designed to give beginning students a thorough understanding of the linguistic structure of modern Arabic in its universally standard form. Some attention is also given to the Afro-Asiatic language family in general and to the Semitic branch in particular.
NOTE: Students who have received credit for ARAB 451 may not take this course for credit.
NOTE: Students whose first language is Arabic, or who have received a substantial part of their education in Arabic, are not permitted to take this course for credit.

LING 498 ***Advanced Topics in Linguistics*** (3 credits)
LING 499 ***Advanced Topics in Linguistics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

Modern Languages

The following courses give instruction in language and cultures not normally covered by the Department. Any or all of them may be offered when a specific ethnic community has persuaded the University of its interest in seeing them put on, and of its willingness to support them.

MODL 298 ***Special Topics in Modern Languages*** (3 credits)
MODL 299 ***Special Topics in Modern Languages*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

MODL 398 ***Special Topics in Modern Languages*** (3 credits)
MODL 399 ***Special Topics in Modern Languages*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

MODL 498 ***Advanced Topics in Modern Languages*** (3 credits)
MODL 499 ***Advanced Topics in Modern Languages*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

Portuguese

PORT 400 ***Portuguese Language and Literature*** (6 credits)
Prerequisite: SPAN 255 or equivalent, and any 6 credits at the 400 level in Spanish. A course designed for advanced Spanish language students. Readings in Portuguese begin as early as the second week of class.
NOTE: Students whose first language is Portuguese, or who have received a substantial part of their education in Portuguese, are not permitted to take this course for credit.

Russian

RUSS 330 ***The Structure of Russian*** (6 credits)
Prerequisite: No previous knowledge of Russian required. An accelerated but thorough introduction to the grammatical structure of modern Russian. The emphasis is on reading. The course aims to provide students with the ability to read scholarly and literary prose with the aid of a dictionary. Intended primarily for students who need Russian as an aid to research and for students of linguistics.
NOTE: Students who have credit for RUSS 210 or a higher-level Russian course may not take this course for credit.

RUSS 400 ***Advanced Russian Grammar and Readings*** (6 credits)
Prerequisite: RUSS 330 or equivalent. This course is a continuation of RUSS 330. Further readings with emphasis on scientific and scholarly prose. Considerable attention is devoted to advanced points of grammar, vocabulary, stylistics and translation.
NOTE: Students who have received credit for a "400"-level course in Russian may not take this course for credit.

SPAN 210 ***Introductory Course in Spanish A/B*** (6 credits)
A comprehensive and thorough introductory language course for the student with little or no knowledge of Spanish. Practice is given in reading, writing, and conversation, with particular emphasis placed on oral work. In the second term, classes are conducted, as far as possible, in Spanish. Lectures and laboratory.

SPAN 211 ***Introductory Course in Spanish B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of SPAN 210. It is designed for students who have taken some Spanish at the CEGEP level or equivalent. Lectures and Laboratory.
NOTE: Students who have received credit for SPAN 210 may not take this course for credit.

SPAN 250 ***Intermediate Spanish A/B*** (6 credits)
Prerequisite: SPAN 210 or equivalent. Included in this course are a complete review of Spanish grammar and a study of some advanced aspects of usage. Composition and oral practice are emphasized. Selected readings are assigned through which the student becomes familiar with some aspects of Hispanic letters and civilization. This class is conducted in Spanish.

SPAN 251 ***Intermediate Spanish B*** (3 credits)
Prerequisite: Permission of the Department. This course is equivalent to the second term of SPAN 250. It is designed for students who have taken at least four semesters of Spanish at the CEGEP level or equivalent. This class is conducted in Spanish.
NOTE: Students who have received credit for SPAN 250 may not take this course for credit.

SPAN 255 ***Translation*** (6 credits)
Prerequisite: SPAN 210 or equivalent. This course offers a complete review of Spanish grammar and deals with some advanced aspects of usage. Translation techniques are especially emphasized. Readings include novels and short stories.
NOTE: Students who received credit for SPAN 235 prior to 1980-81 may not take this course for credit.

SPAN 298 ***Special Topics in Spanish*** (3 credits)

SPAN 299 ***Special Topics in Spanish*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SPAN 301 ***Composition*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255, or permission of the Department. A course in directed composition designed to help the student develop effective written communication skills through practice. This course is compulsory for students in Honours or Major in Spanish programmes. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 300 prior to 1986-87 may not take this course for credit.

SPAN 302 ***Advanced Grammar*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. A course on certain advanced aspects of idiom and usage. This course is compulsory for students in Honours or Major in Spanish programmes. Conducted in Spanish.
NOTE: Students who have received credits for SPAN 300 prior to 1986-87 may not take this course for credit.

SPAN 303 ***Methods of Literary Analysis*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. Fundamental concepts of literary theory and criticism. Application to Hispanic texts (poetry, narratives, drama). This course should be taken in conjunction with a literature survey course. Conducted in Spanish.

SPAN 305 ***Advanced Translation*** (6 credits)
Prerequisite: SPAN 255 or equivalent. This course offers to the advanced student practice in translation from English and French into Spanish. Specimen texts include literary prose, commercial letters, journalistic articles, and a variety of material of current interest.

SPAN 310 ***Survey of Spanish Literature I*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. From the origins to the Golden Age through a study of representative works. Conducted in Spanish.

SPAN 311 ***Survey of Spanish Literature II*** (3 credits)
Prerequisite: SPAN 310 or permission of the Department. From the Golden Age to the modern period through a study of representative works. Conducted in Spanish.

SPAN 320 ***Survey of Spanish American Literature I*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. From the Colonial period to Modernism through a study of representative works. Conducted in Spanish.

SPAN 321 ***Survey of Spanish American Literature II*** (3 credits)
Prerequisite: SPAN 320 or permission of the Department. From Modernism to the present through a study of representative works. Conducted in Spanish.

SPAN 360 ***Spanish Civilization*** (6 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. This course is designed to acquaint the student with Spain's intellectual and cultural history as reflected in its writers. Although the course is primarily concerned with ideas and aesthetics, attention is also given to the development of language, customs, and folklore.

SPAN 361 ***Spanish-American Civilization*** (6 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. A study of the development of Spanish-American civilization from pre-Columbian times to the present. The student traces Spanish-American cultural and political thinking from Colonial times to the present, as reflected in the literature.

SPAN 398 ***Special Topics in Spanish*** (3 credits)

SPAN 399 ***Special Topics in Spanish*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

UNLESS OTHERWISE INDICATED, ALL COURSES WITH NUMBERS 400 AND HIGHER WILL BE CONDUCTED IN SPANISH

SPAN 406 ***Medieval Language and Literature I*** (3 credits)
Prerequisite: SPAN 310; SPAN 311 or permission of the Department. A linguistic and literary analysis of representative works. A study of the evolution of Vulgar Latin into Iberoromance, with the emphasis on Castilian. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 405 and/or SPAN 465 prior to 1986-87 may not take this course for credit.

SPAN 407 ***Medieval Language and Literature II*** (3 credits)
Prerequisite: SPAN 310; SPAN 311; SPAN 406 or permission of the Department. A linguistic and literary analysis of representative works. A study of the evolution of Vulgar Latin into Iberoromance, with the emphasis on Castilian. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 405 and/or SPAN 465 prior to 1986-87 may not take this course for credit.

SPAN 411 ***Golden Age—Prose*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255; SPAN 310; SPAN 311, or equivalent. Critical study of the novel and other narrative didactic genres of the sixteenth and seventeenth centuries through analysis of representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 410 prior to 1986-87 may not take this course for credit.

SPAN 412 ***Golden Age — Theatre*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255; SPAN 310; SPAN 311, or equivalent. Development of the Spanish theatre of the sixteenth and seventeenth centuries through analysis of representative texts. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 410 prior to 1986-87 may not take this course for credit.

SPAN 413 ***Golden Age — Poetry*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255; SPAN 310; SPAN 311, or equivalent. The study and analysis of the main currents of Spanish poetry of the sixteenth and seventeenth centuries. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 410 prior to 1986-87 may not take this course for credit.

SPAN 416 ***Peninsular Neoclassicism and Romanticism*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255; or equivalent. From Spanish Neoclassicism to Romanticism through a study of representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 415 prior to 1986-87 may not take this course for credit.

SPAN 417 ***Peninsular Realism and Naturalism*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. From Spanish Realism to Naturalism through a study of representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 415 prior to 1986-87 may not take this course for credit.

SPAN 420 ***The Generation of 1898*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255, or equivalent. A study of the major writers of this generation: Unamuno, Valle-Inclan, Machado, Baroja, Azorin, Maeztu, etc.

SPAN 431 ***Twentieth-Century Spanish Literature*** (6 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. From the group of 1927 through the Post-Civil War period to the present; through a study of representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 425 and/or SPAN 435 prior to 1986-87 may not take this course for credit.

SPAN 432 ***Twentieth-Century Spanish-American Literature*** (6 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. A study of the evolution of Spanish-American literature from 1900 to the present through certain representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 445 and/or SPAN 455 prior to 1986-87 may not take this course for credit.

SPAN 441 ***Spanish-American Romanticism*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. A study of Spanish-American Romanticism through certain representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 440 may not take this course for credit.

SPAN 442 ***Spanish-American Modernism*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. A study of Spanish-American Modernism through certain representative works. Conducted in Spanish.
NOTE: Students who have received credit for SPAN 440 may not take this course for credit.

SPAN 451 ***Literature of the Mexican Revolution of 1910*** (3 credits)
Prerequisite: SPAN 250 or SPAN 255 or equivalent. This course undertakes the critical study of representative works from the era of the Mexican Revolution of 1910 by writers such as Azuela, López y Fuentes, Rubén Romero and González Peña.
NOTE: Students who have received credit for SPAN 450 may not take this course for credit.

SPAN 480 ***Tutorial I*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American language, and/or literature, to meet the student's individual needs.

SPAN 481 ***Tutorial II*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American language, and/or literature, to meet the student's individual needs.
NOTE: Students who have received credit for SPAN 481 may register for SPAN 482, provided the subject matter is different.

SPAN 482 ***Tutorial III*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American language, and/or literature, to meet the student's individual needs.
NOTE: Students who have received credit for SPAN 480 may register for SPAN 482, provided the subject matter is different.

SPAN 483 ***Tutorial IV*** (3 credits)
Prerequisite: Permission of the Department. Guided readings in Spanish or Spanish-American language, and/or literature, to meet the student's individual needs.
NOTE: Students who have received credit for SPAN 481 may register for SPAN 483, provided the subject matter is different.

SPAN 498 ***Advanced Topics in Spanish*** (3 credits)

SPAN 499 ***Advanced Topics in Spanish*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.220 Philosophy

Chair
CHISTOPHER B. GRAY, *Associate Professor*

Professors
ROGER B. ANGEL
STANLEY G. FRENCH
ERNEST JOOS
ANDREW KAWCZAK
DALLAS LASKEY
DESIREE PARK

Associate Professors
MOBIN M. AHMAD
Sr. PRUDENCE ALLEN
EDMUND EGAN
HERMAN H. LAU
JOHN McGRAW
VINCENT McNAMARA
SHEILA MASON MULLETT
DENNIS O'CONNOR
JACK ORNSTEIN
MARTIN REIDY
VLADIMIR ZEMAN

Assistant Professor
MURRAY CLARKE

Adjunct Associate Professor
JOHN DOYLE

The Philosophy Department offers a number of programmes of study which include: Honours, Specialization, Major and Minor, and certain joint programmes. Double majors programmes are also offered in consultation with other departments. The Philosophy Department should be consulted for information concerning these programmes. Seminars and tutorials are offered mainly for students in a programme in Philosophy. In addition, courses are offered to students with a general or specific interest in Philosophy.

Students enrolled in Philosophy programmes are required to confirm their status with the Department during the second week of lectures of each year.

Students who already had Honours status by June 1, 1977, will continue to be governed by the requirements that applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Honours in Philosophy

Stage I
6 Chosen from PHIL 201^3, 202^6, 211^6, 223^3, 245^3
6 PHIL 241^6
6 PHIL 310^6

Stage II
6 Chosen from PHIL 224^6, 226^3 and 228^3, 321^6, 323^3
6 PHIL 412^6
6 PHIL elective or cognate credits*

Stage III
6 Chosen from PHIL 313^6, 410^6, 467^3, 468^3
6 Chosen from PHIL 421^6, 449^6, 485^6, 498^3, 499^6
6 PHIL 460^6
6 *PHIL elective credits at the 300 or 400 level

**PHIL elective and cognate credits to be chosen in consultation with the Department.*

NOTE: Students preparing for graduate work should acquire a good reading knowledge of a related modern language or of Classical Greek or Latin.

60 BA Specialization in Philosophy

Stage I
6 Chosen from PHIL 201^3, 202^6, 211^6, 223^3, 245^3
6 PHIL 241^6
6 PHIL 310^6

Stage II
6 Chosen from PHIL 224^6, 226^3 and 228^3, 321^6, 323^3
6 PHIL 412^6
6 PHIL elective or cognate credits*

Stage III
6 Chosen from PHIL 313^6, 410^6, 467^3, 468^3
6 Chosen from PHIL 421^6, 449^6, 485^6, 498^3, 499^6
6 PHIL 460^6
6 PHIL elective credits at the 300 or 400 level*.

**PHIL elective and cognate credits to be chosen in consultation with the Department.*

36 BA Major in Philosophy

Stage I
6 Chosen from PHIL 201^3, 202^6, 211^6, 223^3 and 245^3
6 PHIL 310^6

Stage II and III
6 Chosen from PHIL 241^6, 410^6, 412^6
6 Chosen from PHIL 313^6, 412^6, 467^3, 468^3
12 PHIL elective credits to be chosen in consultation with the Department.

24 Minor in Philosophy

6 Chosen from PHIL 201^3, 202^6, 211^6, 223^3 and 245^3
18 PHIL elective credits to be chosen in consultation with the Department.

48 **BA Major in Political Philosophy**

18 POLI 270[6], 273[3], 370[6], 371[3], 372[6], 373[3], 470[6]; CLAS 240[3]/HIST 223[3], CLAS 341[3]/HIST 323[3], CLAS 242[3]/HIST 225[3], CLAS 343[3]/HIST 327[3]

6 Chosen from PHIL 201[3], 202[6], 211[6], 223[3], 245[3]

24 Chosen from PHIL 334[3], 335[3], 341[6], 342[3], 344[3], 346[3], 350[6], 357[3], 358[3], 412[6], 417[6], 467[3], 468[3]; SOCI 300[6]

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

PHIL 201 ***Problems of Philosophy*** (3 credits)
This course is designed for students who wish to be acquainted with philosophy through problems rather than through the historical approach. Methods used in Philosophy are discussed and topics, such as the existence of God, the mind-body problem, freedom and determinism, rights and duties, are used to illustrate philosophical approaches.
NOTE: This course may not be taken for credit by students who have taken PHIL 202 at Concordia; CEGEP students who have been exempted from PHIL 202 may take PHIL 201 for credit with the permission of the Department.

PHIL 202 ***Introduction to Philosophy*** (6 credits)
A study of basic questions in the major areas of philosophy, and the classical attempts to answer them.
NOTE: This course may not be taken for credit with PHIL 201 at Concordia.

PHIL 211 ***Philosophical Classics*** (6 credits)
A critical discussion of selected philosophical classics. Readings are chosen from Plato, Aristotle, Descartes, Hume, Kant, and one recent or contemporary philosopher.

PHIL 223 ***Critical Thinking*** (3 credits)
This course is designed to help students to think more clearly and critically and to improve their ability to present, defend, and evaluate arguments. Sample topics may include the nature of definition, validity and truth, formal and informal fallacies.

PHIL 224 ***Introduction to Logic*** (6 credits)
A study of the basic elements of Aristotelian and modern logic, including an analysis of argumentation, language, definition, fallacies, deduction, and induction.

PHIL 226 ***Elementary Deductive Logic*** (3 credits)
This course begins with an analysis of syllogistic logic and proceeds to an extensive treatment of propositional logic. The course concludes with an examination of the rudiments of predicate logic. The techniques of constructing formal derivations are included.

PHIL 228 ***Methods of Enquiry*** (3 credits)
A study of the methods and structure of basic types of organized knowledge: mathematics, science, history, and normative disciplines. This course discusses crucial concepts in scientific methodology, such as the axiomatic system, the hypothetico-deductive method, and scientific explanation.

PHIL 230 ***Human Identity*** (3 credits)
A critical examination of some theories of human identity, including reference to male and female identity, the unity of self, and transcendence of self. Works are selected from the history of philosophy, literature, and the social sciences.

PHIL 231 ***Introduction to General Systems Theory*** (6 credits)
An elementary survey of the transdisciplinary general systems approach. Such basic concepts as structure information and regulation are explored, and a teleological framework suited to the social and behavioural sciences are developed.

PHIL 240 ***Philosophical Anthropology*** (6 credits)
A study of representative classical and contemporary positions on human nature, action, and life. Such topics as knowledge, affectivity, freedom, person, are treated.

PHIL 241 ***Ethics*** (6 credits)
A study of the principles underlying moral conduct with reference to classical and contemporary positions.

PHIL 242 ***Business Ethics*** (3 credits)
The purpose of this course is to elucidate the key ethical notions with reference to the business world. The intention is to make students aware of situations in which ethical implications arise rather than to impose specific rules.

PHIL 244 ***Social and Political Philosophy*** (6 credits)
Prerequisite: Six credits in Philosophy, or the permission of the Department. This course treats of the individual in relation to the State and Society through the reading and discussion of selected texts. Problems treated: political authority, its sources and varieties; the limits of political authority; classical images of humanity; personality and society; the paradox of social control.

PHIL 245 ***Philosophy and Society*** (3 credits)
The purpose of this course is to introduce students to the philosophical treatment of social problems. Examples would include conceptions of the person as individual and as citizen, as free and as determined, as well as conceptions of the state and of the community.

PHIL 246 ***Introduction to Philosophy of Religion*** (3 credits)
This course examines the classical arguments for the existence of God. Course content includes the nature of faith and of religious experience, as well as the nature of religious language.

PHIL 248 ***Biomedical Ethics*** (3 credits)
This course is a study of the moral and legal norms involved in medical issues such as health care priorities; euthanasia; fertility control and abortion, protection of the incapable; preventive medicine; problems of physician and patient relationships; human experimentation; genetic engineering; and behaviour modification.

PHIL 255 ***Philosophy of Leisure*** (3 credits)
This course examines philosophical problems relating to such issues as: leisure, recreation, labour, time and fulfillment. The aim is to stimulate the student to think critically about the goals of individuals and of society as they concern these issues. The course is of interest to students in Recreation and Leisure Studies and to others interested in the problems of using free time to best advantage.

PHIL 298 ***Special Topics in Philosophy*** (3 credits)

PHIL 299 ***Special Topics in Philosophy*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

PHIL 310 ***Ancient Western Philosophy*** (6 credits)
A study of the principal developments from the Presocratics through Plato and Aristotle up to Plotinus. Emphasis is placed on the critical reading of selected texts.

PHIL 312 ***Existentialism*** (6 credits)
A course designed to acquaint the student with the fundamentals of the existentialist movement as a philosophical perspective. Among philosophers considered are Kierkegaard, Nietzsche, Heidegger, Sartre, Merleau-Ponty, Jaspers, Marcel, and Berdyaev.

PHIL 313 ***Contemporary Philosophy*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. A study of selected philosophers of the twentieth century. Movements and figures discussed vary from year to year. Such topics as the following are considered: Positivism, Pragmatism, Marxism, Phenomenology, Existentialism, and Philosophical Analysis.

PHIL 321 ***Symbolic Logic*** (6 credits)
An introduction to modern formal logic, its techniques and applications. The course covers sentential logic, first-order predicate logic with identity, intuitive set theory, relations, and functions.

PHIL 323 ***Predicate Logic*** (3 credits)
Prerequisite: PHIL 226 or its equivalent. A study of first order predicate logic, including its meta theory. Some applications or extensions of the basic calculus are dealt with.
NOTE: This course may not be taken for credit with PHIL 321.

PHIL 328 ***Conceptual Revolutions in Twentieth Century Science I*** (3 credits)
This course begins with a consideration of the structure and growth of scientific theories and of the relationship between theory and observation. This is followed by a fairly detailed exposition of Einstein's theories of special relativity and general relativity. The philosophical implications of the two theories is carefully considered, with particular attention being devoted to the fundamental revisions of the concepts of space and time, which these theories have forced upon us.

PHIL 329 ***Conceptual Revolutions in Twentieth Century Science II*** (3 credits)
The major part of this course is devoted to the conceptual development of quantum mechanics, with special attention to such topics as the wave-particle duality, causality and determinism, the principle of indeterminacy, and the distinction between the knowing subject and the object of knowledge. It concludes with a discussion of Gödel's celebrated incompleteness theorem, which has profound implications concerning our views on the relationship between logic and mathematics, the nature of mathematical truth and even for the ultimate prospects for the field of artificial intelligence.

PHIL 332 ***Philosophical Ideas in Literature I*** (3 credits)
Prerequisite: Six credits in Philosophy or permission of the Department. A critical examination of philosophical ideas as expressed in various literary works. The subject matter is chosen for its relevance to such themes as the nature of human action and interaction, choice, freedom, women and men, chance, and values.
NOTE: Students who have received credit for PHIL 331 may not take this course for credit.

PHIL 333 ***Philosophical Ideas in Literature II*** (3 credits)
Prerequisite: Six credits in Philosophy or permission of the Department. An approach to philosophical ideas in literature through a comparison of authors. This could involve authors from different historical time frames, different cultural world views, or elaborate different perspectives of a single author.
NOTE: Students who have received credit for PHIL 331 may not take this course for credit.

PHIL 334 ***Russian Anarchism and Marxism*** (3 credits)
The contradictory character of Russian cultural and philosophical development is used as a basis for an analysis of the main philosophical differences between Anarchism and Marxism as presented in the works and activities of its main protagonists (Bakunin, Kropotkin, Plekhanov, Lenin). Philosophical relevance of such major Russian writers as Dostoyevsky, Tolstoy, and Solzhenitsyn is shown as well.

PHIL 335 ***Contemporary Marxism*** (3 credits)
Critical and comparative analysis of different schools and individual thinkers of twentieth-century Marxism, in particular, those in Russia, Germany, and France. These positions are considered primarily on their philosophical merits.

PHIL 338 ***Philosophical Psychology*** (3 credits)
A critical examination of the explanation of human behaviour and the self in the light of new developments in philosophy and psychology. Detailed studies of selected problems such as motives, intention, the concept of person, choice, reason, freedom, purpose, and action.

PHIL 340 ***Contemporary Theories of Love*** (6 credits)
Prerequisite: One previous course in Philosophy. A two-semester topical analysis of love and attendant phenomena, with special emphasis on their metaphysical, epistemological, psychological, aesthetic, social, theological, and linguistic dimensions. The classes are conducted on a lecture-seminar basis.

PHIL 341 ***Political Philosophy*** (6 credits)
Prerequisite: Six credits in Philosophy, or the permission of the Department. This course concentrates on the theoretical foundations of communism, fascism, and democracy through the reading and discussion of selected texts.

PHIL 342 ***Political Philosophy*** (3 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. Critical analysis of contemporary political-philosophical concepts, such as tolerance, violence, separatism, racism, and the nationalism of visible minorities.

PHIL 344 ***Law, Liberty, and Human Rights*** (3 credits)
In this course, the student examines several perspectives from which the problem of the relation between law and morality may be treated. Conflicting concepts of law, morality, and the relation of the individual to society are discussed. The problem of authority is examined in relation to issues of civil liberties, civil rights, and the social basis of legal conflicts.

PHIL 345 ***Philosophy of Social Science*** (6 credits)
Prerequisite: Six credits in Philosophy or third-year standing in a social science department, or permission of the Department. Following the distinction between natural and social sciences, this course is concerned with philosophies of the social sciences. It investigates the structure, methodology, and problems of these sciences toward understanding and clarifying how they function as quasi-separable disciplines and how they contribute to a wider understanding of individuals and their varied social relations.

PHIL 346 ***Philosophy of Social Science*** (3 credits)
Philosophical examination of the structure and methodology of the social sciences. Special attention to problems of functionalism, teleological explanation, and the testing of social theories.

PHIL 347 ***Phenomenology and Psychology*** (3 credits)
This is an introduction to the fundamentals of Phenomenology through a study of conscious experience, both subjective and intersubjective. Standard psychological models and methods are examined in order to open up phenomenological alternatives in the fields of aesthetics, literary criticism, religious and moral experience. Phenomenology complements psychological research in these areas.

PHIL 348 ***Philosophy of Culture*** (6 credits)
Prerequisite: Six credits in Philosophy, or the permission of the Department. This course entails a philosophical critique of contemporary culture, stressing such issues as identity crisis, the weakening of structures of orthodoxy, meditation and humour in relation to the vita activa, work in relation to labour, and the socio-cultural manifestation of value crisis.

PHIL 349 ***Philosophy of Education*** (6 credits)
An examination of philosophical principles underlying educational theories and of the problems arising from the practical implementation of those theories.

PHIL 350 ***Philosophy of Communication*** (6 credits)
This course is concerned with a philosophical analysis of the foundations of communication acts: linguistic and non-linguistic, cognitive and affective.

PHIL 351 ***Philosophy of Religion*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. A critical assessment of modern developments in Philosophy regarding the question of whether the thinking individual can maintain a religious belief in God.

PHIL 352 ***Philosophy of History*** (6 credits)
Prerequisite: Six credits in a History programme, or permission of the Philosophy Department. An analysis of the nature of historical knowledge and explanation is followed by a study of classical and contemporary attempts to elucidate the meaning of history. Authors discussed include Augustine, Vico, Kant, Hegel, Marx, Spengler, Popper, Toynbee.

PHIL 353 ***Aesthetics I*** (3 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. A philosophical analysis of selected aspects of the aesthetic experience and the logic of appraisal. Specimen topics include: perception in art, symbolic expression, the role of feeling and emotion in aesthetic judgment, objectivity and subjectivity of value judgments, commensurability of values.

PHIL 354 ***Artificial Intelligence*** (3 credits)
Prerequisite: Six credits in Philosophy or in Computer Science. The purpose of this course is to explore the analogy between mental activity and the operation of computers or "electronic brains", with a view to answering the question: Can machines think? Such topics as the following are treated: the concept of the Turing machine; the Turing test of intelligence; the functionalist theory of the mind; the nature of creativity; and the alleged implications of Gödel's incompleteness theorem.

PHIL 357 ***Philosophy of Law: General Jurisprudence*** (3 credits)
A philosophical study of natural law, legal positivist and legal realist replies to the question of what law is. Contemporary and classical replies are criticized and are applied to cases. The associated issues of legal moralism, legal justice, legal obligation and its limits, and legal reasoning are treated.

PHIL 358 ***Legal Philosophy: Legal Rights and Duties*** (3 credits)
A philosophical study of the nature, sources and functions of rights and duties. Attention is given to the particular rights associated with contract and property, and their abuse, to duties arising by law alone, to excuses and justifications for failure to fulfill duties, and to enforcement, punishment and compromise.

PHIL 362 ***Second-Year Seminar*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. Problems in Moral Philosophy, with topics to be announced. This seminar conducts the students through a series of problems on moral topics.

PHIL 398 ***Intermediate Special Topics in Philosophy*** (3 credits)

PHIL 399 ***Intermediate Special Topics in Philosophy*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

PHIL 410 ***Medieval Philosophy*** (6 credits)
Prerequisite: PHIL 310, or permission of the Department. A study of Western Philosophy from Augustine to the later Scholastics.

PHIL 412 ***Modern Philosophy*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. A study of Western Philosophy from Descartes to Hume.

PHIL 417 ***Nineteenth-Century Philosophy*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. An examination of some of the main currents of post-Kantian philosophy. Hegel and the post-Hegelians, the romantic reaction, positivism, and pragmatism.

PHIL 421 ***Philosophy of Science*** (6 credits)
Prerequisite: One course in logic, or permission of the Department. A critical examination of problems pertaining to the structure and status of scientific theories and the logic of scientific inference. Such topics as the following are discussed: explanation, confirmation, verifiability and falsifiability, problems of definition, observational and theoretical terms, models and analogies.

PHIL 422 ***Advanced Topics in Logic*** (3 credits)
Prerequisite: A 300-level course in Symbolic Logic, or permission of the Department. This course is designed to extend the basic knowledge of logic by introducing students to areas such as modal logic, deontic logic, higher-order calculi, logical theory, and logical semantics.

PHIL 449 ***Phenomenology*** (6 credits)
Prerequisite: Twelve credits in Philosophy, or permission of the Department. Origins and development of phenomenology from Brentano and Meinong through the different stages of Husserl's writings. Post-Husserlian modifications are considered briefly. The second term is devoted to a discussion of the influence of the phenomenological movement on contemporary developments in the social sciences and humanities. Actual topics are determined by the student's areas of interest and academic qualifications.

PHIL 453 ***Epistemology*** (6 credits)
Prerequisite: Twelve credits in Philosophy, or permission of the Department. A study of characteristic problems in epistemology, with particular emphasis on their historical and systematic contexts. The concepts analyzed include fundamental questions in the empirical sciences.

PHIL 454 ***Metaphysics*** (6 credits)
Prerequisite: Twelve credits in Philosophy, or permission of the Department. In this course, metaphysics is treated in two ways: firstly, the problem of being in classical and contemporary ontologies; secondly, the metaphysical suppositions underlying epistemological, moral, and social theories.

PHIL 455 ***Aesthetics II*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. This course examines central problems in the philosophy of art and sensibility, examining the works of major authors in this area, such as Aristotle, Longinus, Kant, Hegel, Dewey, Santayana.

PHIL 456 ***Recent Ethical Theory*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. A critical analysis of leading contemporary ethical theories from Moore to the present. Special attention is given to the naturalistic fallacy, the reducibility or normative statements, ethical reasoning, and the relation of ethics to psychology and sociology.

PHIL 457 ***Philosophy of God*** (6 credits)
Prerequisite: Six credits in Philosophy, or permission of the Department. The problem of the natural knowledge of God, including readings from Plato, Aristotle, Anselm, Aquinas, Descartes, Hume, Pascal, Kant, Hegel, Feuerbach, Marx, Kierkegaard, Newman, Nietzsche, Sartre, Ayer, and Russell.

PHIL 460 ***Honours Seminar in Epistemology and Metaphysics*** (6 credits)
Prerequisite: Twelve credits in Philosophy, or permission of the Department. Intensive study of major contemporary issues in the theory of knowledge and metaphysics, designed to accommodate honours students in any department.

PHIL 467 ***Contemporary Analytic Philosophy I*** (3 credits)
Prerequisite: Twelve credits in Philosophy, or permission of Department. The investigation of selected philosophical problems as they arise in the writings of such early analytic philosophers as Moore, Russell, Ayer, Carnap, and the early Wittgenstein.
NOTE: Students who have received credit for PHIL 469 may not take this course for credit.

PHIL 468 ***Contemporary Analytic Philosophy II*** (3 credits)
Prerequisite: Twelve credits in Philosophy, or permission of Department. The investigation of selected philosophical problems as they arise in the writings of such later analytic philosophers as the later Wittgenstein, Quine, Ryle, Wisdom, Austin, and others.
NOTE: Students who have received credit for PHIL 469 may not take this course for credit.

PHIL 471 ***Tutorial in Philosophy*** (3 credits)
Prerequisite: Permission of the Department. This is an opportunity to carry out a personal project under the supervision of a Faculty member. An intensive reading programme is undertaken in the student's area of special interest. Tutorials may be arranged with any Faculty member, and students must make these arrangements and obtain *written* permission in advance of registration.

PHIL 472 ***Tutorial in Philosophy*** (3 credits)
Prerequisite: Permission of the Department. See PHIL 471 for description.
NOTE: Students who have completed PHIL 471 may take this tutorial for credit provided the subject matter is different.

PHIL 485 ***Kant*** (6 credits)
Prerequisite: Twelve credits in Philosophy, or permission of the Department. An intensive study of Kant's *Critique of Pure Reason* and related works.

PHIL 498 ***Advanced Topics in Philosophy*** (3 credits)

PHIL 499 ***Advanced Topics in Philosophy*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.230 Physics

Chair
BARRY FRANK, *Professor*

Professors
DAVID E. CHARLTON
CALVIN S. KALMAN
SUSHIL K. MISRA

Associate Professors
M. STEPHEN DUBAS, s.j.
COLLAPARAMBIL E. EAPPEN
NELSON W. EDDY
ARLIN L. KIPLING
REZSO L. KOVACS
JOHN A. MACKINNON
STANLEY P. MORRIS
RAMESH C. SHARMA
JOSEPH SHIN

Assistant Professor
M. FRANK

Adjunct Associate Professors
G. JAKIMOW
S. SUBRAMANIAN

Adjunct Assistant Professor
N.B. LEWIS

Students are required to complete the appropriate entrance profile for entry into the programme (see §31.002 — Programmes and Admission Requirements — Profiles).

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

72 BSc Honours in Physics

Stage I
15 PHYS 232^3, 243^3, 244^3, 253^3, 254^3
4 Chosen from PHYS 291^1, 292^1, 293^1, 294^1, 295^2

Stages II and III
35 PHYS 252^3, 297^1, 334^3, 335^3, 336^3, 344^3, 354^3, 364^3, 394^1, 435^3, 456^3, 477^3, 478^3
6 MATH 262^3, 263^3
12 Credits to be chosen, either with the approval of the Department, or from the following two patterns —
A: Experimental, or
B: Theoretical.

Pattern A: Experimental
3 Credits chosen from PHYS 345^3, 355^3, 457^3, 465^3, 467^3
9 Credits chosen from PHYS 291^1, 292^1, 295^2, 296^2, 390^3, 391^3, 393^1, 491^3, 495^1, 496^4

Pattern B: Theoretical
9 Credits chosen from PHYS 345^3, 355^3, 457^3, 465^3, 467^3, and
3 Chosen from PHYS 295^2, or 291^1 and 292^1; 393^1 and 495^1

63 BSc Specialization in Physics

Stage I
15 PHYS 232^3, 243^3, 244^3, 253^3, 254^3
4 Chosen from PHYS 291^1, 292^1, 293^1, 294^1, 295^2

Stages I, II and III
20 PHYS 252^3, 297^1, 334^3, 335^3, 354^3, 364^3, 394^1, 477^3
6 MATH 262^3, 263^3
18 Credits to be chosen, either with the approval of the Department, or from the following two patterns —
A: Experimental, or
B: Theoretical

Pattern A: Experimental
9 Credits chosen from PHYS 355^3, 465^3 or 467^3, 478^3
9 Credits chosen from PHYS 291^1, 292^1, 293^1, 294^1, 295^2, 296^2, 390^3, 391^3, 393^1, 491^3, 496^4

Pattern B: Theoretical
12 PHYS 336^3, 344^3, 456^3, 478^3
3 PHYS 435^3 or 465^3 or 467^3
3 PHYS 345^3 or 457^3

80 BSc Specialization in Geology-Physics
See §31.140 — Geology

90 BSc Specialization in Physics/ Marketing
24 PHYS 243^3, 244^3, 253^3, 254^3, 291^1, 292^1, 293^1, 294^1, 295^2, 296^2, 364^3, 394^1
12 To be chosen from PHYS 232^3, 252^3, 297^1, 335^3, 336^3, 344^3, 345^3, 354^3, 355^3, 390^3, 391^3, 393^1, 396^5, 397^5, 435^3, 456^3, 457^3, 465^3, 467^3, 477^3, 478^3, 491^3, 495^1, 496^4
6 MATH 262^3, 263^3
6 DESC 243^3, 244^3, or equivalent
3 PHYS 233^3 or COMP 212^3, or equivalent
6 ACCO 213^3, 218^3
6 MANA 266^3, 340^3
6 ECON 201^3, 203^3
6 MARK 213^3, 350^3
15 Chosen from the Department of Marketing

42 BSc Major in Physics

Stages I, II and III
6 MATH 262^3, 263^3
15 PHYS 243^3, 253^3, 254^3, 291^1, 293^1, 364^3, 394^1
9 Chosen from PHYS 232^3, 244^3, 252^3, 292^1, 294^1, 295^2, 297^1, 334^3, 335^3, 336^3, 344^3, 354^3, 435^3, 456^3, 477^3, 478^3

12 To be chosen with the approval of the Department

NOTE: Students following a Major in Physics must register with the Department by November 1 of each year.

24 Minor in Physics

These credits *must* be chosen in consultation with the Department, and would normally include at least 3 credits in laboratory courses.

NOTE: Students following a Minor in Physics must register with the Department by November 1 of each year.

33 Certificate in Scientific Measurement (Chemistry Option)

19 CHEM 217[3], 218[3], 290[3], 312[3], 392[3], 491[4]
14 PHYS 295[2], 296[2], 396[5], 397[5]

Students may replace PHYS 396[5] with the two courses PHYS 390[3] and PHYS 491[3] if they wish. Concordia students may transfer into the Certificate programme all applicable Concordia credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. Students from other institutions may transfer up to *twelve* applicable credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

32 Certificate in Scientific Measurement (Physics Option)

18 PHYS 253[3], 254[3], 293[1], 294[1], 295[2], 296[2], 354[3], 355[3]
3 Chosen from PHYS 243[3] or 252[3] or 364[3]
5 Chosen from PHYS 396[5] or 397[5]
6 MATH 262[3], 263[3]

Students may replace PHYS 396[5] with the two courses PHYS 390[3] and PHYS 491[3] if they wish. Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

NOTE:
In general, experiments involved in the laboratory courses on the Sir George Williams Campus can be done from week to week, at variable times chosen by the student.

PHYSICS CO-OPERATIVE PROGRAMME

Director
NELSON W. EDDY, *Associate Professor*

The Physics Co-operative Programme is offered to students who are enrolled in the BSc Honours and Specialization in Physics. Students interested in applying for the Physics Co-op should refer to §23 where a full description of the admission requirements is provided.

Academic content is very similar to that of the regular programmes, with some specific recommendations for courses to improve the student's job skills. While it is hoped that most of the positions will be in the Montréal area, students must be prepared to work in other parts of Canada.

Each student is supervised personally and must meet the requirements specified by the Faculty of Arts and Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Physics Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

PHYS 204 ***Mechanics*** (3 credits)
Prerequisite: MATH 203 or equivalent, previously or concurrently. Kinematics, Newton's Laws of Motion. Statics, Dynamics. Conservation of momentum and energy. Rotational motion. Periodic motion. Lectures only.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration. See PHYS 224 for laboratory associated with this course.

PHYS 205 ***Electricity and Magnetism*** (3 credits)
Prerequisite: MATH 203, PHYS 204 or equivalent. Electrical charge and Coulomb's Law. Electrical field and potential. Capacity, Steady state, and transient currents. Electromagnetic induction and alternating currents. Lectures only.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration. See PHYS 225 for laboratory associated with this course.

PHYS 206 ***Waves and Modern Physics*** (3 credits)
Prerequisite: PHYS 204 or equivalent. Simple harmonic motion. Wave propagation. Superposition. Stationary waves. Doppler effect. Interference. Diffraction. Photoelectric effect. Compton effect. Bohr's atom. Radioactivity, fission, fusion. Lectures only.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration. See PHYS 226 for laboratory associated with this course.

PHYS 207 ***Heat and Sound*** (3 credits)
Prerequisite: 6 credits of Collegial Physics, and 6 credits of Collegial Calculus or equivalent. Temperature and thermometry, heat effects, measurement and transfer, thermal properties of matter, thermodynamics, first and second laws, kinetic theory, waves, vibrations, and acoustical phenomena. Lectures: 3 hours per week.
NOTE: This course is intended for pre-Engineering students. Students in programmes leading to the BSc degree may not take this course for credit.

PHYS 210 ***Discoveries in Physics*** (6 credits)
A non-mathematical course in physics specifically designed for students who have had little or no experience in physics. It traces the fundamental ideas from which modern physics has emerged and attempts to develop insights into the understanding of natural phenomena. Lectures only.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit.

PHYS 215 ***The Mechanics of Visual Representation*** (3 credits)
An introductory course combining laboratories and lectures illustrating the basic laws that govern the mechanism of image reproduction. Relevant topics concerning the interaction of light and materials are discussed and demonstrated. Students perform experiments with light-sensitive materials, the pinhole camera, light intensity, and illumination measurement. Human visual response, the gray scale, sensitometry, densitometry, the characteristic curve and ASA, DIN; film speeds are examined in depth. This course is designed to complement COMS 275 (Visual Dynamics I). This course is designed for students in Communication Studies. Laboratory and lectures: 3 hours per week.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit.

PHYS 217 ***The Physics of Photo-Reproduction*** (3 credits)
A combined laboratory and lecture course designed for students in Communication Studies who have some basic knowledge of physical laws. Ideas introduced in the "Mechanics of Visual Representation" (PHYS 215) are further developed, covering such topics as exposure measurements and control, and the Standard Association Institute Photographic Exposure Guide. The mechanics of a lens, image formation, f-stops diaphragm openings, the 3-colour composition of light, the colour-temperature scale, and filters are studied. This course is designed so that students gain an intelligent and efficient use of their equipment. Laboratory and lecture: 3 hours per week.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit.

PHYS 219 ***Physics of Photography*** (3 credits)
Prerequisite: 6 credits of Collegial physics, or the equivalent. This course is intended for students in university science programmes. It includes the following topics: Light, illumination; the photographic process, tone reproduction, the gray scale; sensitometry: the characteristic curve; characteristic curve analysis, gamma, contrast index, film speeds; exposure measurement and control; the exposure guide; previsualization, exposure zones; correct exposure, control of development, Optics: image formation, lenses, standards of definition, depth of focus, depth of field; covering power, perspective; image brightness, exposure, shutters; colour analysis, filters. Lectures and laboratories: 3 hours per week.

PHYS 224 ***Introductory Experimental Mechanics*** (1 credit)
Prerequisite: PHYS 204, previously or concurrently, or permission of the Department. A laboratory course covering fundamental experiments in classical mechanics. Experiments include: Resolution of forces, centrifugal force and conservation of energy, pendulums. Laboratory only, 10 experiments.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

PHYS 225 ***Introductory Experimental Electricity*** (1 credit)
Prerequisite: PHYS 205, previously or concurrently, or permission of the Department. A laboratory course covering fundamental experiments in electricity. Experiments include Kirchoff's Law, resistors in series and parallel, oscilloscope, induction, Alternating Current. Laboratory only. 10 experiments.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

PHYS 226 ***Introductory Experimental Waves and Modern Physics*** (1 credit)
Prerequisite: PHYS 206, previously or concurrently, or permission of the Department. A laboratory course covering the fundamental experiments in waves and modern physics. Experiments include spectrometer measurements. Newton's rings and measurements involving radioactivity. Laboratory only. 10 experiments.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit to be applied to their programme of concentration.

PHYS 232 ***Theoretical Physics I*** (3 credits)
Prerequisite: MATH 262 previously or concurrently. Linear Algebra - Abstract vector space, fundamental concepts of the vector space; linear maps and their representation, orthogonal maps, products of linear maps; an introduction to the eigenvalue problem. Introduction to Differential Equations - Linear first-order and second-order ordinary differential equations (homogeneous and non-homogeneous); general method to find particular solutions; the power-series method; problems from mechanics and electricity. Lectures only.

PHYS 233 ***Computational Methods in Physics*** (3 credits)
Prerequisite: PHYS 243; PHYS 253 previously or concurrently, or permission of the Department. Applications of computers to solve physics problems: solutions of systems of linear equations, least squares analysis; curve fitting/plotting; numerical integration; Monte Carlo techniques. Emphasis on Fortran, but Basic, Pascal or C may be used.

PHYS 241 ***Biomechanics of Human Motion*** (3 credits)
Prerequisite: PHYS 204 or equivalent. The application of elementary laws of mechanics to the understanding of static equilibrium conditions of the human body subjected to external forces — the efficiency of human movement seen from the reference point of physical laws as applied to sports. This course is intended for the physio-therapist, the athlete, and all those interested in understanding body mechanics in the light of inanimate physical laws. Lectures only.
NOTE: Students who have received credit for PHYS 243 or equivalent may not take this course for credit.

PHYS 243 ***Classical Mechanics I*** (3 credits)
Prerequisite: MATH 205, PHYS 204 or equivalent. Fundamental concepts, the laws of motion, equilibrium of forces, friction, forces of constraint, centre of mass, work, potential, motion of a particle, motion in resisting media, simple harmonic oscillation, damped oscillations. Lectures only.
NOTE: See PHYS 291 for laboratory associated with this course.

PHYS 244 ***Classical Mechanics II*** (3 credits)
Prerequisite: PHYS 243 or equivalent. Central forces, Kepler's Laws, dynamics of a system of particles, mechanics of rigid bodies, Lagrange's equations, Hamilton's equations. Lectures only.
NOTE: See PHYS 292 for laboratory associated with this course.

PHYS 252 ***Optics*** (3 credits)
Prerequisite: PHYS 206 or equivalent. Geometrical optics: General treatment of optical systems. Wave optics: review of simple harmonic motion, wave equation, superposition of waves, electromagnetic waves, scattering, polarization, interference-coherent sources, interference-uniformly extended sources, diffraction, waves in a dispersive medium, lasers. Lectures only.
NOTE: Students who have received credit for PHYS 352 may not take this course for credit.

PHYS 253 ***Electricity and Magnetism I*** (3 credits)
Prerequisite: PHYS 205 or equivalent; MATH 262 or equivalent, previously or concurrently. Electric charge, Coulomb's Law, electrostatic forces, electric field, Gauss's Law, electric potential, stored energy. Dielectrics, properties of materials in electric fields. Electric current, conduction in a vacuum and in material media, displacement current, magnetic field of a current, force on a current-carrying wire, magnetic induction, electromotive force, energy stored in a magnetic field. Magnetism in material media, magnetic circuits, Time-varying fields. Capacitance, resistance, inductance; circuitry. Lectures only.
NOTE: See PHYS 293 for laboratory associated with this course.

PHYS 254 ***Electricity and Magnetism II*** (3 credits)
Prerequisite: PHYS 253 or equivalent; MATH 263 or equivalent, previously or concurrently. The field concept. Maxwell's equations. Boundary conditions. Power and energy. The electrostatic field. Electrostatic potential. The concept of capacitance. Polarization. The concept of local field in matter. The magnetostatic field. The Biot-Savart law. The scalar magnetic potential. Plane waves. Total internal reflection. Lectures only.
NOTE: See PHYS 294 for laboratory associated with this course.

PHYS 270 ***Introduction to Energy and Environment*** (3 credits)
This course is designed for students who have little or no background in physics. Topics covered include: Relationship of physics to environment and energy. Concept and definition of work and energy. Interaction of people and inanimate objects with the environment. Heat and chemical energy. Electromagnetic and nuclear energy. Conservation of energy — how it affects everyday life. Sources of energy used on earth. Solar energy. Production of wind power, water power, solar cells from sun's energy, biological uses, biopower. Lectures only.
NOTE: Students in programmes leading to the BSc degree may not take this course for credit.

PHYS 273 ***Energy and Environment*** (3 credits)
Prerequisite: PHYS 270, or 6 credits in CEGEP Physics or equivalent. Nuclear energy stored in the earth. Geothermal energy. Biological energy stored in the earth. Second law of thermodynamics. Entropy. Food energy. Home heating and cooling. Solar heating. Transportation of people, goods, and energy. Recycling materials. Resource conservation and humanity's ability to change — need for a conservation ethic, need for alternate energy sources, need for public knowledge. Lectures only.

PHYS 291 ***Experimental Mechanics I*** (1 credit)
Prerequisite: PHYS 243, previously or concurrently. A laboratory course in mechanics. Experiments include pendulum, coefficient of restitution, centrifugal force, rotational inertia, inelastic impact.

PHYS 292 ***Experimental Mechanics II*** (1 credit)
Prerequisite: PHYS 291. A laboratory course in mechanics. Experiments include the use of air tracks to study acceleration, collisions, dissipative forces, and periodic motion. Other experiments include viscosity and surface tension of liquids.

PHYS 293 ***Experimental Electricity and Magnetism I*** (1 credit)
Prerequisite: PHYS 253, previously or concurrently. A laboratory course in electricity and magnetism. Experiments include motion of electrons in electric and magnetic fields, exponential relaxation, damped oscillations, resonance, nonlinearity, negative resistance.

PHYS 294 ***Experimental Electricity and Magnetism II*** (1 credit)
Prerequisite: PHYS 293. A laboratory course in electricity and magnetism. Experiments include the transistor, amplification and frequency response, transient response and negative feedback, positive feedback and oscillation, periodic structures.

PHYS 295 ***Experimental Electronics I*** (2 credits)
A practical laboratory course in electronics. Experiments include resistors in series and parallel, voltmeter, Ohm's Law, Kirchhoff's Current and Voltage Laws, Ohmmeter, capacitor, inductor, transformer, rectifiers, voltage doubler, zener diode, power supplies.

PHYS 296 ***Experimental Electronics II*** (2 credits)
Prerequisite: PHYS 295. A practical laboratory course in electronics. Experiments include oscilloscope, biasing of bipolar transistors, transistor amplifiers, voltage and current regulators, field-effect transistor, oscillators, operational amplifier circuits, audio amplifier, I-F transformer, limiter, amplitude and frequency modulation.

PHYS 297 ***Experimental Optics*** (1 credit)
Prerequisite: PHYS 252, previously or concurrently. An experimental course in optics. Experiments include diffraction, optical instruments, resonance, and various experiments using lasers. Laboratory only, 10 experiments.
NOTE: Students who have received credit for PHYS 392 may not take this course for credit.

PHYS 298 ***Selected Topics in Physics*** (3 credits)

PHYS 299 ***Selected Topics in Physics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

PHYS 334 ***Thermodynamics*** (3 credits)
Prerequisite: PHYS 204 or equivalent; MATH 205 or equivalent; MATH 262; MATH 263. Temperature, simple thermodynamic systems; work, heat, and first law; ideal gas, Van der Waal's gas, heat engines, reversible and irreversible processes; entropy, second law, thermodynamics potentials, kinetic theory. Maxwell distribution, mean free path. Lectures only.
NOTE: This course should not be taken before the second year of university studies. See PHYS 494 for laboratory associated with this course.
NOTE: Students who have received credit for PHYS 434 may not take this course for credit.

PHYS 335 ***Theoretical Physics II*** (3 credits)
Prerequisite: PHYS 232 or equivalent; MATH 263 previously or concurrently. Linear Algebra: Linear Map, Linear coordinate transformations, eigenvalue problem, Vector space of functions, Sturm-Liouville problem, Fourier Series and applications. Lectures only.

PHYS 336 ***Theoretical Physics III*** (3 credits)
Prerequisite: PHYS 335 or equivalent. Classification and derivation of partial differential equations in physics. Separation of variables technique. The Fourier method for solving partial differential equations. Special Functions. Application to physical problems arising from electrostatics, heat conduction, wave propagation, etc. Lectures only.

PHYS 344 ***Advanced Classical Mechanics*** (3 credits)
Prerequisite: PHYS 232 or equivalent; PHYS 244 or equivalent; MATH 263 or equivalent, previously or concurrently. Lagrangian and Hamiltonian dynamics, collision between particles, motion of rigid bodies, Hamilton-Jacobi theory, small oscillations. Lectures only.

PHYS 345 ***Special Relativity*** (3 credits)
Prerequisite: PHYS 244; PHYS 254; PHYS 364. Historical introduction, Einstein and relativity, application of the Lorentz transformation, four-vectors, the Lorentz invariance of physical theories. Lectures only.

PHYS 354 ***Electronics I*** (3 credits)
Prerequisite: PHYS 205 or equivalent. Semi-conductor physics: p-n junction, bipolar transistor, field-effect transistor, circuit theory, diode applications, bipolar transistor: h-parameters, small-signal amplifiers. Lectures only.
NOTE: See PHYS 295 for laboratory associated with this course.

PHYS 355 ***Electronics II*** (3 credits)
Prerequisite: PHYS 354. Biasing of Transistors; Feedback Analysis, Common Circuits involving Operational Amplifiers; Large Signal Amplifiers, Digital Circuits: gates, flip-flops, logic functions. Lectures only.
NOTE: See PHYS 296 for laboratory associated with this course.

PHYS 364 ***Atomic Physics*** (3 credits)
Prerequisite: PHYS 205 or equivalent; PHYS 206 or equivalent; PHYS 254 recommended. Special relativity. Wave-particle duality. The Rutherford atom, the Bohr-Sommerfeld atom. Origin of quantum theory. Schroedinger's equation. Electrons and ions. Electromagnetic radiation. Atomic structure. Lectures only.
NOTE: This course should not be taken before the second year of university studies. See PHYS 394 for laboratory associated with this course.

PHYS 384 ***Introduction to Astronomy*** (3 credits)
Prerequisite: PHYS 205 or equivalent; MATH 205 or equivalent. The celestial sphere. The Solar System. Celestial mechanics. Basic stellar characteristics. The Galaxy — structure and content. Extragalactic objects. Lectures only.

PHYS 385 ***Astrophysics*** (3 credits)
Prerequisite: PHYS 384. The stars, stellar atmospheres, motion, interiors and populations. Variable stars. Nebulae. Radio, X-ray and infrared sources. The galaxy — population and dynamics. The extragalactic universe. Lectures only.

PHYS 390 ***Experimental Digital Electronics*** (3 credits)
Prerequisite: PHYS 296 or equivalent. Breadboarding digital circuits; gating a signal; truth tables; decade counter; decoders, demultiplexers, multiplexers and sequencers; light-emitting diodes and LED displays; tristate and open collector outputs; flip-flops, monostable multivibrators; semiconductor memories; registers, binary counters, arithmetic elements; Schmitt triggers. Laboratory only.
NOTE: Students who have received credit for PHYS 396 may not take this course for credit.

PHYS 391 ***Introduction to Experimental Microprocessors and Assembly Language Programming*** (3 credits)
Prerequisite: PHYS 233, COMP 212 or equivalent. 8-bit microprocessor architecture with emphasis on Motorola 6800, 6809: opcodes, addressing modes, memory mapped I/O, vectored interrupts, etc. The MSDOS operating system, wordprocessing, Motorola assembly language: pseudocodes, labels, subroutines, interrupt service routines, structured programming techniques. Cross assemblers, RS232 serial tramsmission of ASCII and binary data to remote computers. Laboratory only.
NOTE: Students who have received credit for PHYS 396 may not take this course for credit.

PHYS 393 ***Experimental Thermodynamics*** (1 credit)
Prerequisite: PHYS 334, previously or concurrently. A laboratory course in thermodynamics. Experiments include Clement and Desormes' experiment, vaporization, specific heats, liquid nitrogen boiling. Laboratory only, 10 experiments.
NOTE: Students who have received credit for PHYS 494 may not take this course for credit.

PHYS 394 ***Experimental Atomic Physics*** (1 credit)
Prerequisite: PHYS 226 or equivalent; or permission of the Department. An experimental course in atomic physics. Experiments include the Frank-Hertz experiment, the Zeeman effect, Mass spectrometer, and some X-ray work. Laboratory only, 10 experiments.

PHYS 396 ***Computer Electronics*** (5 credits)
Prerequisite: PHYS 296 or equivalent. Diode clipping circuits, transistor as a switch, multivibrator circuits, logic circuits. Study and troubleshooting of integrated circuit logic gates, J-K flip-flops, analogue-to-digital and digital-to-analogue converters, frequency-divider circuits, digital multiplexers and demultiplexers, pulse-distributor logic gates. Study and implementation of basic logic functions and Boolean expressions to programme a small digital computer. Laboratory only.

PHYS 397 ***Experimental Medical Electronics*** (5 credits)
Prerequisite: PHYS 296 or equivalent. A laboratory course in the maintenance and use of medical instruments, including ECG monitor, electro-cardiograph, cardiotachometer, blood-pressure recorder, respiration-rate recorder, and clinical thermometer. The component parts of the instruments are studied first, and then the instruments are constructed and operated. Laboratory only.

PHYS 398 ***Selected Topics in Physics*** (3 credits)

PHYS 399 ***Selected Topics in Physics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

PHYS 435 ***Statistical Physics*** (3 credits)
Prerequisite: PHYS 334; PHYS 364. Basic probability concepts, statistical description of systems of particles, thermal interactions, microscopic theory and macroscopic measurements, temperature and entropy, M-B, F-D, B-E statistics. Canonical distribution in the classical approximation, general thermodynamics interaction. Lectures only.

PHYS 436 ***Theoretical Physics IV*** (3 credits)
Prerequisite: PHYS 335. Theory of Complex variables leading to Residue theory, with applications to

Physics. Tensor calculus: tensor algebra; line element, covarient differentiation; applications. Lectures only.

PHYS 456 ***Electromagnetic Theory I*** (3 credits)
Prerequisite: PHYS 254; PHYS 336. Derivation of the laws of electrostatics and magnetostatics from the basic experimental laws; methods of images; solutions of Laplace's and Poisson's equations for electrostatic problems, magnetism, Maxwell's equations. Lectures only.

PHYS 457 ***Electromagnetic Theory II*** (3 credits)
Prerequisite: PHYS 456. Wave Solution of Maxwell's equations in various media. Classical model of a dielectric. Helmholtz equation and wave equation by Green's functions. Multipole fields. Interaction of charged particles. Radiation by moving charges. Abraham-Lorentz theory.

PHYS 465 ***Nuclear Physics*** (3 credits)
Prerequisite: PHYS 364; PHYS 477 previously or concurrently. Discussion of nuclear properties. The deuteron, nuclear structure and models. Scattering. Nuclear transitions, disintegrations, and reactions. Radioactivity and decay laws. Passage of radiation through matter, shielding, radiation dosage. Detection and acceleration of particles. Neutrons. Nuclear reactors. Environmental concerns. Lectures only.
NOTE: See PHYS 495 for laboratory associated with this course.

PHYS 467 ***Solid State Physics*** (3 credits)
Prerequisite: PHYS 477 previously or concurrently. Crystal structure of solids. Lattice dynamics. Specific heat. Electrons in metals. Free-electron Theory of conduction. Band Theory. Semi-conductors. Dielectric and magnetic properties of solids. Lectures only.

PHYS 477 ***Quantum Mechanics I*** (3 credits)
Prerequisite: PHYS 244; PHYS 335; PHYS 364. State functions and their interpretation, wave packet, linear momentum, motion of a free particle, Schroedinger's equation, stationary state, solution, potential wells. Lectures only.

PHYS 478 ***Quantum Mechanics II*** (3 credits)
Prerequisite: PHYS 477. The harmonic oscillator, creation operators, approximation methods of solving Schroedinger's equation, perturbation theory, system of particles, motion in three dimensions, spin, angular momentum, hydrogen atom. Lectures only.

PHYS 480 ***Directed Readings in Theoretical Physics*** (3 credits)
Prerequisite: Permission of the Department. A course for advanced students in which a special topic, selected in consultation with a faculty member, is studied in depth.

PHYS 491 ***Experimental Microprocessor Interfacing*** (3 credits)
Prerequisite: PHYS 390, PHYS 391 or equivalent. Address decoding, multiplexing and demultiplexing with TTL integrated circuits. Address decoding circuits, drivers and receivers. Parallel, serial and non-TTL I/O. The STD bus and the Motorola 6800/6809 MPU. Breadboarding, wire-wrapping and soldering techniques. The use of oscilloscopes, logic probes and computers for circuit trouble-shooting. Drawing schematic diagrams. Timing diagrams. Data sheets. Laboratory only.

PHYS 495 ***Experimental Nuclear Physics*** (1 credit)
Prerequisite: PHYS 394; PHYS 465, previously or concurrently. A laboratory course in nuclear physics. Experiments include gamma- and beta-ray spectroscopy, nuclear magnetic resonance, absolute counting, half-life determination, nuclear activities. Laboratory only, 10 experiments.

PHYS 496 ***Methods of Experimental Physics*** (4 credits)
Prerequisite: PHYS 294; PHYS 296; PHYS 394 or equivalent, or permission of the Department. Projects may include experiments in nuclear physics, optics, solid state, etc. Two examples are a fibre optics laboratory (with laser) and detection and analysis of environmental radioactivity (e.g., radon gas). Students are encouraged to propose projects and have the opportunity to design and build equipment. Laboratory only.

PHYS 498 ***Advanced Topics in Physics*** (3 credits)

PHYS 499 ***Advanced Topics in Physics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.240 Political Science

Chair
HENRI P. HABIB, *Professor*

Professors
ARTHUR KROKER
LESLIE LASZLO
LALITA P. SINGH

Associate Professors
HAROLD ANGELL
PARIS ARNOPOULOS
HAROLD CHORNEY
RONALD C. COYTE
MARCEL DANIS
ANDREW B. GOLLNER
KLAUS HERRMANN
HORST HUTTER
GUY LACHAPELLE
JAMES W. MOORE
EVERETT M. PRICE
HARVEY SHULMAN
BLAIR WILLIAMS

Assistant Professors
LUC BERNIER
MABEN POIRIER
DANIEL SALEE

Research Fellow
MARGUARITE MENDELL

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Honours in Political Science
6 POLI 200[6]
6 Chosen from POLI 270[6], 271[3], 273[3]
6 Chosen from POLI 372[6] or 374[6]
42 Chosen from at least three of the five Groups in Political Science, with a minimum of 30 credits taken at the 300 or 400 level, 12 of which must be seminar courses.
6 credits may be taken in a cognate discipline with the permission of the Department.

60 BA Honours in Political Science (Concentration in a Special Field of Study)
18 POLI 200[6], 270[6], or 271[3] and 273[3], 372[6] or 374[6]
18 Chosen from at least three of the five Groups in Political Science
24 Chosen from one of the five Groups in Political Science with a minimum of 12 credits taken at the 400 level.*
**6 credits may be taken in a cognate discipline with the permission of the Department.*

60 BA Specialization in Political Science
6 POLI 200[6]
12 Chosen from Group V: Theory
42 Chosen from at least two of the other four Groups in Political Science. A minimum of 30 credits must be taken at the 300 or 400 level, 6 of which must be a seminar course.
6 credits may be taken in a cognate discipline with the permission of the Department.

42 BA Major in Political Science
6 POLI 200[6]
36 Chosen from at least three of the five Groups in Political Science. A minimum of 24 credits must be taken at the 300 or 400 level.

42 BA Major in Political Science (Concentration in one Group)
6 POLI 200[6]
24 Chosen from one of the five Groups in Political Science. A minimum of 18 credits must be at the 300 or 400 level.
6 Chosen from the other four Groups in Political Science at the 300 or 400 level.
6 Chosen from a cognate discipline (courses to be designated)

24 Minor in Political Science
6 POLI 200[6]
18 Chosen from any of the five Groups in Political Science. A minimum of 12 credits must be taken at the 300 or 400 level.

The Department of Political Science offers the following programmes of study: a General Honours; an Honours, with concentration in a special field of study; a Specialization; a General Major; a Major, with concentration in a Special field of study; and a Minor.

In order to maintain Honours status, students must obtain approval for their programmes from the Honours Adviser each year prior to registration. In the second year of the Honours programme, each student will choose a faculty adviser to advise the student on course selection and seminar research essays.

Students who already had Honours status by June 1, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

The Specialization is designed for students who wish to acquire a broad knowledge of the discipline without the additional requirements of the Honours programme.

The programme of courses leading to a Minor in Political Science consists of 24 credits in the Department. The Minor is designed to provide an opportunity for students to make a combination with a Specialization, a Major, or Honours in another discipline. A student's Minor will be

arranged in consultation with the Department of Political Science so that it relates to courses in the Major area of study.

Explanation of Course Numbers.

1. Courses in the 200 range are open to all Political Science students, and to students in other departments.
2. All 400-level courses are taught as seminars and require at least one 300-level prerequisite.
3. Special permission of the Department is required for exemptions to the above.

Group 1: International

POLI 210 International Relations (6 credits)
POLI 311 International Public Law (3 credits)
POLI 313 International Law and Power Relations (3 credits)
POLI 315 International Organization (3 credits)
POLI 317 Regional Organizations (3 credits)
POLI 321 The Middle East in World Politics (3 credits)
POLI 323 Eastern Europe in World Politics (3 credits)
POLI 348 Latin America and the Caribbean in World Affairs (3 credits)
POLI 359 Canadian External Affairs (3 credits)
POLI 410 Institutions of World Society (6 credits)
POLI 412 Foreign Policy and Diplomacy (6 credits)
POLI 415 International Justice (3 credits)
POLI 417 Peace Studies (3 credits)
POLI 419 Strategic Studies (3 credits)
POLI 421 Transnational Politics (3 credits)
POLI 425 Macropolitics (6 credits)

Group 2: Comparative Politics

POLI 319 European Politics (3 credits)
POLI 324 Western European Governments (3 credits)
POLI 327 American Government and Politics (3 credits)
POLI 329 American Foreign Policy (3 credits)
POLI 331 British Government and Politics (3 credits)
POLI 333 The Government and Politics of the Soviet Union (3 credits)
POLI 334 Women and the Law (6 credits)
POLI 335 Contemporary Politics of China (3 credits)
POLI 337 Contemporary Politics of Japan (3 credits)
POLI 339 Mid-East Political Systems I (3 credits)
POLI 340 Political Systems of Southern Asia (3 credits)
POLI 341 Mid-East Political Systems II (3 credits)
POLI 342 Asia and Power Politics (3 credits)
POLI 343 West African Government and Politics (3 credits)
POLI 344 Comparative Political Analysis (3 credits)
POLI 345 East African Government and Politics (3 credits)
POLI 346 Political Systems of Latin America and the Caribbean (3 credits)
POLI 352 Comparative Urban Politics and Government (3 credits)
POLI 389 Religion and Politics (3 credits)
POLI 430 Comparative Political Parties (6 credits)
POLI 431 State and Socio-Economic Change in South Asia (3 credits)
POLI 432 Western Political Systems (6 credits)
POLI 434 Asian Political Systems (6 credits)
POLI 436 Politics of East Europe (6 credits)

Group 3: Canadian

POLI 240 Canadian Public Law (6 credits)
POLI 250 Canadian Government and Politics (6 credits)
POLI 334 Women and the Law (6 credits)
POLI 351 Canadian Federalism (3 credits)
POLI 352 Comparative Urban Politics and Government (3 credits)
POLI 353 Québec Politics (3 credits)
POLI 355 Nationalism: The Canadian Experience (3 credits)
POLI 356 Canadian Political Parties (3 credits)
POLI 358 Interest Groups and Public Opinion in Canada (3 credits)
POLI 359 Canadian External Affairs (3 credits)
POLI 363 Issues in Canadian Public Policy (3 credits)
POLI 365 Canadian Public Administration (3 credits)
POLI 367 Québec Public Administration (3 credits)
POLI 450 Québec Government and Politics (6 credits)
POLI 452 Intergovernmental Relations in Canada (6 credits)
POLI 453 The Provinces in Canadian Federalism (3 credits)
POLI 454 Legislative, Executive, and Judicial Decision-Making (6 credits)
POLI 471 Political Thought and Ideology in Canada (3 credits)
POLI 476 Political and Party Finance in Canada and Québec (3 credits)

Group 4: Public Policy and Administration

POLI 260 Introduction to Public Policy and Administration (6 credits)
POLI 349 Political and Social Theory and the City (3 credits)
POLI 352 Comparative Urban Politics and Government (3 credits)
POLI 357 Social and Political Power in Canadian Society (3 credits)
POLI 360 Comparative Public Administration (6 credits)
POLI 361 Government, Society and the Public Purpose (3 credits)
POLI 363 Issues in Canadian Public Policy (3 credits)
POLI 365 Canadian Public Administration (3 credits)
POLI 367 Québec Public Administration (3 credits)
POLI 369 Regionalism and Public Policy in Canada (3 credits)
POLI 381 Bureaucracy and Public Policy (3 credits)
POLI 385 Environmental Issues and Policy (3 credits)
POLI 412 Foreign Policy and Diplomacy (6 credits)
POLI 454 Seminar on Legislative, Executive, and Judicial Decision-Making (6 credits)
POLI 461 The State and Economic Life (3 credits)
POLI 462 Comparative Public Policy (6 credits)
POLI 463 Government and Business in Canada (3 credits)
POLI 465 Analysis and Evaluation of Public Policy (3 credits)

Group 5: Theory

POLI 270 History of Political Theory (6 credits)
POLI 271 Ancient Greek Political Philosophy (3 credits)
POLI 273 Roman, Medieval, and Renaissance Political Philosophy (3 credits)
POLI 275 Women and Politics (3 credits)
POLI 325 Ideas and Ideologies in the Middle East (3 credits)
POLI 344 Comparative Political Analysis (3 credits)
POLI 370 Problems and Concepts in Political Theory (6 credits)
POLI 371 Early Modern Political Philosophy (3 credits)
POLI 372 Methodology of Political Science (6 credits)
POLI 373 Late Modern Political Philosophy (3 credits)
POLI 374 Introduction to Quantitative Political Inquiry (6 credits)
POLI 375 Nationalism: Origins, Operation, Significance (3 credits)
POLI 377 Catholic Social and Political Thought (3 credits)
POLI 470 Contemporary Political Thought (6 credits)
POLI 471 Political Thought and Ideology in Canada (3 credits)
POLI 472 Communications and Politics (6 credits)
POLI 473 Political Theory and Historical Understanding (3 credits)
POLI 474 Political Theory and Scientific Method (6 credits)
POLI 475 Marxism (3 credits)

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

POLI 200 ***Introduction to Political Science*** (6 credits)
A description of the features universal to the governing processes of societies, and the nature and consequences of the major variations in these processes. The course combines a theoretical and conceptual framework, with a study of selected political systems and countries. It is designed to act both as an introduction to the discipline for those students who plan to study further and to serve also those students who require a systematic examination of the field in a single course.

POLI 210 ***International Relations*** (6 credits)
An introductory course in world affairs. Among the topics covered are: the historical evolution of the international system; definitions of basic concepts; types of conflict and cooperation among states; environmental, economic, socio-cultural, and ideological factors; critical problems, current issues, and major trends in world politics.

POLI 240 ***Canadian Public Law*** (6 credits)
This course is an introduction to Canadian Public Law, emphasizing such areas as constitutional law, criminal law, administrative law, applications for bail, and consumer protection. In addition, the course involves a study of the organization and functioning of the court system.
NOTE: Students who have received credit for POLI 350 may not take this course for credit.

POLI 250 ***Canadian Government and Politics*** (6 credits)
An institutional and functional analysis of the Canadian federal system. The course centers upon the major problems of concern in the Canadian political process and considers the formal and informal institutions within which these problems might be solved. The political system is studied within the context of federalism; the electoral system; political parties; interest groups; public opinion and the Canadian political culture.

POLI 260 ***Introduction to Public Policy and Administration*** (6 credits)
An introductory course in the processes of implementing and making policy as practiced in the principal political systems of the modern world. The course emphasizes the role of the civil service at the various levels of government in preparing and executing public policies and legislation.

POLI 270 ***History of Political Theory*** (6 credits)
A general survey of the writings of the great thinkers in the western political tradition, from the classical period to the middle of the nineteenth century. This course provides a general introduction to the history of political thought.
NOTE: Students who have received credit for POLI 271 or 273 may not take this course for credit.

POLI 271 ***Ancient Greek Political Philosophy*** (3 credits)
A study of the political thought of the ancient Greeks. The principal texts studied are *The Republic of Plato* and *The Politics* of Aristotle. This course is particularly recommended for students in the political theory area of concentration.
NOTE: Students who have received credit for POLI 270 may not take this course for credit.

POLI 273 ***Roman, Medieval, and Renaissance Political Philosophy*** (3 credits)
A study of the political thought of Rome, the Middle Ages, and the Renaissance, with special emphasis upon the political writings of Cicero, St. Augustine, St. Thomas Aquinas, and Machiavelli. This course is recommended for students in the political theory area of concentration.
NOTE: Students who have received credit for POLI 270 may not take this course for credit.

POLI 275 ***Women and Politics*** (3 credits)
A study of the role of women in public movements, public policy and political parties, with reference to ideology theories on the role of women in society.

POLI 298 ***Selected Topics in Political Science*** (3 credits)

POLI 299 ***Selected Topics in Political Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

POLI 311 ***International Public Law*** (3 credits)
An introductory course in legal inter-state relations. Among the topics covered are: the sources and development of law; relationships with municipal law; meaning of legal concepts; rights and duties of states; sovereignty and territoriality; state recognition and succession.

POLI 313 ***International Law and Power Relations*** (3 credits)
A general course on the role of law in world politics. Among the topics covered are: the theory and reality of law; international transactions and diplomatic law; customary and treaty law; judicial settlement of disputes; the laws of war and neutrality.

POLI 315 ***International Organizations*** (3 credits)
An introductory course in intergovernmental institutions. Among the topics covered are: the development of international public unions; the League of Nations and the United Nations; the structure and function of international administration; specialized agencies and world order.

POLI 317 ***Regional Organizations*** (3 credits)
A general course in international structural integration. Among the topics covered are: the dynamics of socio-political unification; theories of regionalism; supra-national communities and common markets. Emphasis is given to institutions such as the EEC, COMECON, OAS, OAU, LAFTA, and ASEAN.

POLI 319 ***European Politics*** (3 credits)
A course on institutions in the European community. The course focuses on supranational regional integration and possible future developments.
NOTE: Students who have received credit for POLI 233 may not take this course for credit.

POLI 321 ***The Middle East in World Politics*** (3 credits)
A survey of major regional and international problems facing the Middle East. The role of foreign powers is examined with special emphasis on the USA and USSR. Selected topics include the Arab-Israeli question, the Lebanese crises, the Cyprus crises, the Iranian Revolution and its impact on international affairs and the crisis of the Gulf, Horn of Africa and the Red Sea.

POLI 323 ***Eastern Europe in World Politics*** (3 credits)
This course deals with the role of the Soviet Union and its East European allies in international affairs. Among the topics covered are: the ideological foundations and historical development of socialist foreign policy; problems of domestic security, defense, international trade, foreign aid, and expansion of influence; the East European alliance system, CEMA, and the WTO (Warsaw Pact).

POLI 324 ***Western European Governments*** (3 credits)
A course in comparative government, focusing on the political institutions of the principal nation-states of the Western European continent, including those in Scandinavia, Iberia and the British Isles.
NOTE: Students who have received credit for POLI 231 may not take this course for credit.

POLI 325 ***Ideas and Ideologies in the Middle East*** (3 credits)
A survey of contemporary major political, historical, socio-economic and religious ideologies and movements, which affect Middle Eastern political thought. Special attention is directed to Arab nationalism, Zionism, Turkish nationalism, the Islamic Revival in Iran, Socialism and Communism.

POLI 327 ***American Government and Politics*** (3 credits)
A course on the political structures and processes of the United States, focusing on the constitutional framework and domestic politics of the federal system.

POLI 329 ***American Foreign Policy*** (3 credits)
A course in the role of the United States in the world. The course considers the strategic position and superpower status of the U.S.A. through its foreign policy and its diplomatic relations with other countries.

POLI 331 ***British Government and Politics*** (3 credits)
Government and politics in Britain, with particular emphasis on political parties and pressure groups, the changing role of the legislature and executive, and the Public Corporations. The issues of current constitutional interest are discussed, such as the office of Prime Minister and Parliamentary sovereignty.

POLI 333 ***The Government and Politics of the Soviet Union*** (3 credits)
A study of the government and politics of the Soviet Union. Discussion of the basic theories of Communism and the evolution of the Soviet System.

POLI 334 ***Women and the Law*** (6 credits)
Prerequisite: POLI 200 or equivalent. An historical comparative study of the status of women as seen in different legal systems. The course deals with women in relation to private, family, and public law. The framework is primarily legal, but also includes a consideration of the social and political implications of women's legal status. Special attention is directed to Québec and Canadian law.

POLI 335 ***Contemporary Politics of China*** (3 credits)
An analysis of the political development of and change in China since the triumph of Communism in China, with special emphasis on the role of the CCP, mass mobilization and prospect, and influence on Asia and world politics.

POLI 337 ***Contemporary Politics of Japan*** (3 credits)
An analysis of the political change in and development of Japan since the end of World War II, with special emphasis on the reorientation of Japan, characteristics of Japanese modernization and of post-industrial politics, problems of national post-industrial politics, problems of national security and constitutional pacifism, and influence on Asia and world politics.

POLI 339 ***Mid-East Political Systems I*** (3 credits)
A comparative study of the government and politics of Arab North Africa, namely Egypt, Libya, Tunisia, Morocco, Algeria and the Sudan. A link between these and other Middle Eastern Governments is made.

POLI 340 ***Political Systems of Southern Asia*** (3 credits)
A study of government and politics of South and Southeast Asia, with special reference to India, Pakistan, Indonesia and Vietnam.

POLI 341 ***Mid-East Political Systems II*** (3 credits)
A comparative study of the government and politics of the Arabian Peninsula, the states of Iraq, Syria, Lebanon, Jordan, Israel, Turkey and Iran. A link between these and the North African Arab states is made.

POLI 342 ***Asia and Power Politics*** (3 credits)
A study of super powers' policies in Asia and the international relations of India, China, Japan, Indonesia and Vietnam.

POLI 343 ***West African Government and Politics*** (3 credits)
A study of political institutions and process in West Africa, with special reference to Nigeria, Ghana, Togo, Guinea, Cameroon and Angola.

POLI 344 ***Comparative Political Analysis*** (3 credits)
Prerequisite: POLI 200. This course deals with theoretical aspects of comparative politics. Topics include: terms and concepts of political analysis, theories of modernization and political development, dependency, corporatism, and state autonomy.
NOTE: Students who have received credit for POLI 230 may not take this course for credit.

POLI 345 ***East African Government and Politics*** (3 credits)
A study of political institutions and processes in East Africa with special reference to Zambia, Zimbabwe, Tanzania, Kenya and Mozambique.

POLI 346 ***Political Systems of Latin America and the Caribbean*** (3 credits)
A study of political change, reform and revolution, military rule, and the experiences of representative government in selected countries of South America, Central America and the Caribbean.

POLI 348 ***Latin America and the Caribbean in World Affairs*** (3 credits)
A study in inter-American relations, the dependency perspective, sub-regional integration, and international relations of selected states of the area.

POLI 349 ***Political and Social Theory and the City*** (3 credits)
This course examines the theoretical and ideological aspects of city government in historical and normative perspective.
NOTE: Students who have received credit for POLI 336 may not take this course for credit.

POLI 351 ***Canadian Federalism*** (3 credits)
Prerequisite: POLI 250. A critical and analytical study of the theory of federal government and its application to the nature, principles, and techniques of federalism in Canada. The reaction of the Canadian federal system to the demands of cultural dualism and regional pressures. Some attention is also given to the problems of provincial governments and Federal-Provincial relations.

POLI 352 ***Comparative Urban Politics and Government*** (3 credits)
This course deals with politics and government in selected Canadian cities, with comparative reference to cities elsewhere in the world.
NOTE: Students who have received credit for POLI 336 may not take this course for credit.

POLI 353 ***Québec Politics*** (3 credits)
Prerequisite: POLI 250. A study of the changing party structure and political issues in Québec and their relationship to constitutional, cultural, and economic factors.

POLI 355 ***Nationalism: The Canadian Experience*** (3 credits)
Prerequisite: POLI 250, or permission of the Department. Examines the origins and development of nationalism and regionalism in Canada, with particular attention centered upon the interaction between French-Canadian and English-Canadian nationalist sentiments. Considers the similarities and divergencies of nationalist and regionalist sentiment in Canada with those of European nationalism, and evaluates their significance with regard to the development of the Canadian federation and its capacity to confront the realities and demands of the modern technological environment.

POLI 356 ***Canadian Political Parties*** (3 credits)
Prerequisite: POLI 250. A study of national political parties with emphasis on ideology, political organization, leadership and political recruitment.

POLI 357 ***Social and Political Power in Canadian Society*** (3 credits)
Prerequisite: POLI 250. An analysis of power and influence in Canadian society. The course reviews theoretical approaches to the study of political power and influence leading to an examination of such key determinants of power as social class, elites, and economic structures in Canada.

POLI 358 ***Interest Groups and Public Opinion in Canada*** (3 credits)
Prerequisite: POLI 250. An examination of the function of interest groups, formulation and expression of public opinion, and its impact on public policy.

POLI 359 ***Canadian External Affairs*** (3 credits)
This course examines Canada's position in the world. The presentation includes an outline of the diplomatic history of Canada, as well as an analysis of its foreign and defence policies. Emphasis is given to the decision-making process by which policy is formulated and executed, with particular reference to Canadian relations vis-à-vis the United States, the Commonwealth, and the United Nations.
NOTE: Students who have received credit for POLI 451 may not take this course for credit.

POLI 360 ***Comparative Public Administration*** (6 credits)
Concerned with the theories and maxims, as well as with the development of public administration. The student is introduced to issues such as the organization of governmental departments, budget policy, decision-making in government administration, personnel selection and training methods, as well as the application of efficiency ratings. There is, throughout, strong emphasis on attitudes and differences pertinent to the civil service in a selected group of countries.

POLI 361 ***Government, Society and the Public Purpose*** (3 credits)
An examination of the broad social, economic, political and cultural forces shaping governmental decisions and policies. Particular attention is paid to the conflict between private and public concerns.

POLI 363 ***Issues in Canadian Public Policy*** (3 credits)
The course examines alternative public policies in selected areas at the federal, provincial, and municipal levels in Canada, leading towards the development of individual research projects. Policies analyzed vary from year to year and include such areas as: social welfare policy, culture, education, and language policy; environmental protection, energy conservation, urban renewal, economic policy.

POLI 365 ***Canadian Public Administration*** (3 credits)
Prerequisite: POLI 250, or permission of the Department. This course examines the organization and composition of the federal bureaucracy, the role of the bureaucracy in the making and execution of public policy, patterns of recruitment, and the mechanisms of accountability to, and control over the behaviour of, these bodies.

POLI 367 ***Québec Public Administration*** (3 credits)
Prerequisite: POLI 250, or permission of the Department. This course examines the organization and composition of the provincial bureaucracy, the role of Québec civil servants in the making and execution

of public policy, patterns of recruitment, and the mechanisms of accountability to, and control over the behaviour of, these bodies.

POLI 369 ***Regionalism and Public Policy in Canada*** (3 credits)
Prerequisite: POLI 250. An examination of the impact of regionalism on public policy in Canada with special emphasis on the problems of regional disparity and conflict. An historical analysis of national development policies and regional underdevelopment leads to a study of federal-provincial development strategies, and an assessment of alternative policies for the alleviation/elimination of regional disparities.

POLI 370 ***Problems and Concepts in Political Theory*** (6 credits)
Prerequisite: POLI 270, or POLI 271; POLI 273. A course in political theory that examines central concepts in political thinking, such as liberty, equality, and power. The content of the course includes basic methodology and terminology to the extent that the thematic orientation in any given year may require its inclusion.

POLI 371 ***Early Modern Political Philosophy*** (3 credits)
The Reformation and rise of modern individualism. The principal political thinkers studied in this period are Luther, Calvin, Bellarmine, Bodin, Hobbes, Harrington.

POLI 372 ***Methodology of Political Science*** (6 credits)
A study of the contemporary subject matter and methods of political science. The course deals with: 1) fundamental concepts, principles, institutions, and processes of politics; 2) methods and techniques of the study of Politics, including an introduction to statistical analysis; 3) present approaches, such as functionalism, behaviourism, and practical laboratory periods.

POLI 373 ***Late Modern Political Philosophy*** (3 credits)
The Enlightenment and its critics, and the political thought of the early industrial period. The most important thinkers studied in this period are: Locke, Montesquieu, Hume, Rousseau, J.S. Mill.

POLI 374 ***Introduction to Quantitative Political Inquiry*** (6 credits)
A study of the logic and methodology of Political Science research. Special attention is paid to the formulation of hypotheses and research design; the study of quantitative methods of data collection and analysis; and, the introduction of SPSS (Statistical Package for Social Sciences).

POLI 375 ***Nationalism: Origins, Operation, Significance*** (3 credits)
Examines the foundations of nationalist ideology developed originally in the early nineteenth century as a purely European phenomenon. Considers specific nationalist ideologies — European, African, Asian, etc., with regard to their modality of operation, and their significance in relation to a society's capacity to evolve and confront the demands, both internal and external, of the contemporary environment.

POLI 377 ***Catholic Social and Political Thought*** (3 credits)
An inquiry into contemporary Catholic social and political thought as stated in papal encyclicals; a broad survey of Catholic political activity as manifested in the European and Latin-American Christian Socialist and Christian Democratic movements and parties.

POLI 381 ***Bureaucracy and Public Policy*** (3 credits)
Prerequisite: POLI 365 or POLI 367. An examination of the expanding role of the federal or provincial bureaucracy in the development and implementation of public policy in Canada. Particular attention is devoted to the sources of increasing bureaucratic power and to the patterns of interaction among the cabinet, parliament and the bureaucracy.

POLI 385 ***Environmental Issues and Policy*** (3 credits)
An examination of selected environmental issues, and public and governmental response to these issues. This course examines the making of public demands related to environmental issues (through movements and interest groups) and its impact on governmental response (in terms of policy outputs).

POLI 389 ***Religion and Politics*** (3 credits)
A study of the impact of religion on political processes and movements in selected countries and areas.

POLI 398 ***Selected Topics in Political Science*** (3 credits)

POLI 399 ***Selected Topics in Political Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

POLI 410 ***Institutions of World Society*** (6 credits)
An advanced study of the institutions of contemporary international society. The discussions emphasize constitutional and structural aspects of universal and regional inter-governmental organizations, institutions of diplomacy and international law, supranational communities and transnational corporations.

POLI 412 ***Foreign Policy and Diplomacy*** (6 credits)
A specialized course on the substance, formulation and implementation of foreign policy in selected

countries. Special attention is paid to theoretical frameworks, inputs in decision making, policy evaluation, diplomatic establishments, diplomatic negotiation, treaty making, and conference diplomacy.
NOTE: Students who have received credit for POLI 411, 413 may not take this course for credit.

POLI 415 ***International Justice*** (3 credits)
A specialized course on the role of morality in world affairs. Among the topics covered are: Human Rights and collective values; individual obligation and state responsibility; relativistic ethics and universal standards; natural law and equity; international stratification and inequality; international courts of justice and the legitimation of world order.

POLI 417 ***Peace Studies*** (3 credits)
A specialized course on the theory and practice of world peace. Among the topics covered are: the causes of war and the conditions of peace; human aggression and the peace movement; structural violence and revolution; nationalism and cosmopolitanism; disarmament and peacekeeping.

POLI 419 ***Strategic Studies*** (3 credits)
A specialized course in power politics and defence policy. Among the topics covered are: balance of power and collective security; military alliances and spheres of influence; the East-West cold war and détente; theories of geopolitics and imperialism; nuclear weapons and the arms race; deterrence and game theory.

POLI 421 ***Transnational Politics*** (3 credits)
A specialized course in international socio-economic relations. Among the topics covered are: the North-South confrontation and the New International Economic Order; multi-national corporations and non-governmental organizations; the Third World and the politics of development; economic interdependence and self-reliance; political influence of trade, aid, and investment; natural resources and the limits to growth.

POLI 425 ***Macropolitics*** (6 credits)
An advanced study of conflict-resolution and policy making processes of international systems. The seminar centres on processes and dynamics of international systems. Specific topics may include such subjects as relations of super powers with regional powers, East-West and North-South confrontations, or the impact of technology on international politics.

POLI 430 ***Comparative Political Parties*** (6 credits)
A study of the history, ideology, and organization of a selected number of countries representing different political systems.

POLI 431 ***State and Socio-Economic Change in South Asia*** (3 credits)
This is a study of the role of the state in nation-building, modernization and development in India, Pakistan, Bangladesh, and Sri Lanka. Special attention is paid to topics such as ideology, national development, the state, poverty, community development and social change.

POLI 432 ***Western Political Systems*** (6 credits)
A seminar on the political systems of western Europe and North America.

POLI 434 ***Asian Political Systems*** (6 credits)
A discussion of selected themes — nationalism, communism, process of modernization and/or Asian political institutions, political forces and foreign policies. The topics may vary from year to year.

POLI 436 ***Politics of East Europe*** (6 credits)
A study of selected governmental issues in the Soviet Union and Eastern Europe.

POLI 450 ***Québec Government and Politics*** (6 credits)
A study of the institutions and functions of the executive, legislative, judicial, and administrative branches of the Québec government. A detailed study of Québec's jurisdictional and fiscal problems with the federal government. Discussion on the political process in Québec; the electoral system, political parties, pressure groups, and public opinion. The role of the Catholic Church in Québec politics. A study of the most important thinkers in French Canada.

POLI 452 ***Intergovernmental Relations in Canada*** (6 credits)
An examination of the structure and process of relations among the federal, provincial and municipal levels of government. Particular attention is on the development and administration of shared programmes and the problems of intergovernmental cooperation.

POLI 453 ***The Provinces in Canadian Federalism*** (3 credits)
An analysis of regional political cultures in Canada; the development of provincial parties and public administrations; the rise of third parties; electoral behaviour and provincial public opinion.

POLI 454 ***Legislative, Executive, and Judicial Decision-Making*** (6 credits)
An examination of formulation of decisions in the legislative, executive, and judicial branches of government, using Canada as the model.

POLI 461 ***The State and Economic Life*** (3 credits)
An examination of the development of the welfare state and the forces contributing to the expansion of government intervention in the economy. Particular attention is devoted to the causal interdependence among values, political power, wealth, the general pattern of social stratification, and economic development.
NOTE: Students who have received credit for POLI 460 may not take this course for credit.

POLI 462 ***Comparative Public Policy*** (6 credits)
A comparative analysis of some of the major policy problems confronting industrially advanced societies. The aim is to understand how similar problems are approached by different political systems.

POLI 463 ***Government and Business in Canada*** (3 credits)
A course in public policy designed to explore the relationship between government and business in Canada. Particular attention is given to the formation and implementation of policies intended to promote and control enterprise and the role of government as entrepreneur.
NOTE: Students who have received credit for POLI 460 may not take this course for credit.

POLI 465 ***Analysis and Evaluation of Public Policy*** (3 credits)
An advanced study of the various theoretical approaches to policy planning, evaluation and analysis and of the various conceptual, methodological and ethical issues emergent in the evaluation of governmental policy performance.

POLI 470 ***Contemporary Political Thought*** (6 credits)
A study of the most important political thinkers and the main currents of political thought in the past century.

POLI 471 ***Political Thought and Ideology in Canada*** (3 credits)
A study of the writings of the most significant political and social thinkers in Canada, and of the main ideological orientations in Canadian politics.

POLI 472 ***Communications and Politics*** (6 credits)
This course examines communication and national unity, communications and social mobilization, politics and the mass media, the use of political symbols, communication, and authority, and the "Canadian School" of culture and communications, based on the ideas of Harold Innis.

POLI 473 ***Political Theory and Historical Understanding*** (3 credits)
An advanced seminar on the relation between historical understanding and political thought.

POLI 474 ***Political Theory and Scientific Method*** (6 credits)
An advanced seminar on the problems of applying scientific method in the study of politics.

POLI 475 ***Marxism*** (3 credits)
A critical examination of the major texts of Marx and Engels, and a study of representative selections of Marxist thinkers chosen from among the following: Kautsky, Plekhanov, Lenin, Luxemburg, Trotsky, Stalin, Lukacs, Gramsci, Althusser, Mao.

POLI 476 ***Political and Party Finance in Canada and Québec*** (3 credits)
Prerequisite: POLI 250. This course discusses the ways and means of financing political parties, conventions and elections in Québec, and elsewhere in Canada. The course also examines the influence of party financing on party organization, elections, leadership, the governmental systems and policies of parties and governments.
NOTE: If credit has been received for this topic under a POLI 498 number, this course may not be taken for credit.

POLI 498 ***Advanced Topics in Political Science*** (3 credits)

POLI 499 ***Advanced Topics in Political Science*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.250 Psychology

Chair
NORMAN SEGALOWITZ, *Associate Professor*

Professors
ZALMAN AMIT
TANNIS ARBUCKLE-MAAG
ANNA BETH DOYLE
DOLORES GOLD
HERBERT LADD
CAMPBELL PERRY
ALEX E. SCHWARTZMAN
LISA SERBIN
PETER SHIZGAL
JANE STEWART
ROY A. WISE

Associate Professors
SHIMON AMIR
DAVID ANDRES
PAUL BABARIK
JACINTHE BARIBEAU
JAN HEINE BAUER
WILLIAM BRENDER
GABRIEL BRETON
MICHAEL BROSS
WILLIAM BUKOWSKI
JUNE S. CHAIKELSON
THOMAS GRAY
ELIZABETH HENRIK
ANTHONY HILTON
W. RONALD HOOPER
MELVIN K. KOMODA
ROBERT D. SEENS
PETER SERAGANIAN
MORRIS L. SHAMES
NANCY D. TAYLOR
MICHAEL W. von GRUNAU
CHARLES W. WHITE
DONNA WHITE
BARBARA WOODSIDE

Associate Professor of Applied Social Science and Psychology
DOROTHY MARKIEWICZ

Assistant Professors
MICHAEL CONWAY
JAMES JANS
REX B. KLINE
JEAN-ROCH LAURENCE
SYDNEY B. MILLER
ZBIGNIEW PLESZEWSKI
DIANE POULIN-DUBOIS
JOSEPH ROCHFORD
PIERRE-PAUL ROMPRÉ
DAVID SINYOR
DALE M. STACK

Adjunct Associate Professors
HALLIE FRANK
RONALD V. KRUK
EVA LIBMAN
APOSTOLOS PAPAGEORGIOU
WERONIKA TROJNIAR

Adjunct Assistant Professors
CARLOS ARAGON
CHARLENE BERGER
SAM BURSTEIN
MERYL ELMAN
GARY GERBER
ALAIN GRATTON
MICHAEL MEANEY
GEORGE NEMETH
OLGA OVERBURY
BRIAN SMITH

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

Students must apply to the Departmental Honours Adviser for formal admission to Honours Programmes. The application is usually made after completion of the first-year courses.

Students who already had Honours status by June 1, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

For additional information concerning programmes and courses, students should consult the course guide published annually by the Department.

66 BA Honours in Psychology
Stage I
6 PSYC 310^3, 311^3
3 PSYC 315^3 concurrently with 310^3
3 PSYC 316^3 concurrently with 311^3
6 PSYC 320^6
Stages II and III
9 Chosen from PSYC 343^3, 346^3, 349^3, 352^3
3 PSYC 344^3 or 347^3 or 350^3 or 353^3
6 PSYC 357^6 or 360^6 or 363^6 or 366^6
12 Chosen from PSYC 330^6, 333^6, 336^6, 339^6
6 Department-approved Psychology electives at "300" or "400" level
Stage III
6 PSYC 420^6
6 PSYC 430^6

66 BSc Honours in Psychology
Stage I
6 PSYC 310^3, 315^3 concurrently
6 PSYC 311^3, 316^3 concurrently
Stages I and II
6 PSYC 320^6
12 Chosen from PSYC 357^6, 360^6, 363^6, 366^6, 369^3, 381^3, 384^3

Stages II and III

9 Chosen from PSYC 343[3], 346[3], 349[3], 352[3]

3 PSYC 344[3] or 347[3] or 350[3] or 353[3]

6 Chosen from PSYC 330[6] or 333[6] or 336[6] or 339[6]

6 Psychology electives at "300" or "400" level selected in consultation with a psychology programme adviser

Stage III

6 PSYC 420[6]

6 PSYC 430[6]

NOTE: In addition students must take a minimum of 15 science credits outside the department selected in consultation with the Psychology programme adviser.

Psychobiology Option

Students wishing to do BSc Honours (Psychobiology Option) must take PSYC 357 or 360 as part of their Psychology programme.

To complete the option students will select 21 credits in Chemistry and Biology from the courses listed below. Fifteen of these credits will replace the 15 outside credits of science electives and up to 6 of these credits may be substituted for 6 credits of Psychology electives.

Stage I

6 CHEM 221[3] and 222[3]

Stages I and II

6 BIOL 230[3] and CHEM 271[3]

Stages II and III

9 Chosen from BIOL 261[3], 321[3], 333[6], 335[3], 336[3], 364[3], 365[3], 462[3], CHEM 475[3], 476[3]

60 BA Specialization in Psychology

Stage I

6 PSYC 310[3], 311[3]

3 PSYC 315[3] concurrently with 310[3]

3 PSYC 316[3] concurrently with 311[3]

6 PSYC 320[6]

Stages II and III

9 Chosen from PSYC 343[3], 346[3], 349[3], 352[3]

3 PSYC 344[3] or 347[3] or 350[3] or 353[3]

6 PSYC 357[6] or 360[6] or 363[6] or 366[6]

12 Chosen from PSYC 330[6], 333[6], 336[6], 339[6]

12 Department-approved Psychology electives at "300" or "400" level.

60 BSc Specialization in Psychology

Stage I

6 PSYC 310[3] and 315[3] concurrently

6 PSYC 311[3] and 316[3] concurrently

Stages I and II

6 PSYC 320[6]

12 Chosen from PSYC 357[6], 360[6], 363[6], 366[6], 369[3], 381[3], 384[3]

Stages II and III

9 Chosen from PSYC 343[3], 346[3], 349[3], 352[3]

3 PSYC 344[3] or 347[3] or 350[3] or 353[3]

6 Chosen from PSYC 330[6] or 333[6] or 336[6] or 339[6]

12 Psychology electives at the "300" and "400" level selected in consultation with the Psychology programme adviser.

In addition students must take a minimum of 15 science credits outside the department selected in consultation with the Psychology programme adviser.

Psychobiology Option

Students wishing to do BSc Specialization (Psychobiology Option) must take PSYC 357 or 360 as part of their Psychology programme.

To complete the option students will select 21 credits in Chemistry and Biology from the courses listed below. Fifteen of these credits will replace the 15 outside credits of science electives and up to 6 of these credits may be substituted for 6 credits of Psychology electives.

Stage I

6 CHEM 221[3] and 222[3]

Stages I and II

6 BIOL 230[3] and CHEM 271[3]

Stages II and III

9 Chosen from BIOL 261[3], 321[3], 333[6], 335[3], 336[3], 364[3], 365[3], 462[3], CHEM 475[3], 476[3]

42 BA Major in Psychology

Stage I

6 PSYC 310[3], 315[3] concurrently

6 PSYC 320[6]

Stage II

A total of 24 credits to be taken from the following two sets of courses:

12 Chosen from PSYC 343[3], 346[3], 349[3], 352[3], 357[6], 360[6], 363[6], 366[6]

12 Chosen from PSYC 330[6], 333[6], 336[6], 339[6]

6 Department-approved Psychology electives at 300- or 400-level except PSYC 330[6], 333[6], 336[6] and 339[6]

42 BSc Major in Psychology

Stage I

6 PSYC 310[3], 315[3] concurrently

6 PSYC 320[6]

Stage II

12 Chosen from PSYC 357[6], 360[6], 363[6], 366[6]

12 Chosen from PSYC 330[6], 333[6], 336[6], 339[6], 343[3], 346[3], 349[3], 352[3]

6 Department-approved Psychology electives at 300- or 400-level except PSYC 357, 360, 363, and 366

30 Minor in Psychology

Stage I

3 PSYC 310[3]

3 PSYC 315[3] concurrently with 310[3]

6 PSYC 320[6]

Stages II and III

12 Chosen from PSYC 330[6], 333[6], 336[6], 339[6], 343[3], 344[3], 346[3], 347[3], 349[3], 350[3], 352[3], 353[3], 357[6], 360[6], 363[6], 366[6]

6 Department-approved Psychology electives at 300- or 400-level

NOTE: Students in programmes leading to the BSc degree are reminded that PSYC 320 and PSYC 390-394 do not count as Science credits. All other "300" and "400" level Psychology courses count as Science credits.

Students should see §200.1 for a list of equivalent courses.

PSYC 200 ***Introductory Psychology*** (6 credits)
This comprehensive survey course introduces the student to the phenomena and terminology encountered in a number of areas of scientific psychology. Topics covered include basic mechanisms of the receptors and nervous system, memory, motivation, perception, learning, abnormal psychology, personality, cognition, and social aspects of behaviour.
NOTE 1: Students who have received credit for PSYC 200 or equivalent may not take MANA 213 for credit.
NOTE 2: Students who have credit for or exemption from Introductory Psychology at CEGEP or elsewhere may not take this course for credit.

PSYC 280 ***Adolescence*** (3 credits)
Prerequisite: Introductory Psychology or equivalent. This course deals with various aspects of adolescence including such topics as physical change, sexual and sex-related behaviours, cognitive growth and lifestyles.
NOTE: This course is intended for students not enrolled in psychology programmes. Students who have received credit for PSYC 379 or 39l may not take this course for credit.

PSYC 281 ***Learning Disabilities*** (3 credits)
Prerequisite: Introductory Psychology or equivalent. This course deals with selected aspects of theory and practice related to learning disabilities including perceptual and motor disabilities, language disabilities and methods of diagnosis and remediation.
NOTE: This course is intended for students not enrolled in psychology programmes. Students who have received credit for PSYC 377 or 392 may not take this course for credit.

PSYC 283 ***Emotional Development*** (3 credits)
Prerequisite: Introductory Psychology or equivalent. This course focuses on emotional development in childhood. Topics that may be considered include prenatal and genetic influences on emotion, attachment formation, effects of alternative child care, role of father and poverty. The normal development of anxiety, fear and affection is discussed.
NOTE: This course is intended primarily for students in the Family Life Education Certificate programme (Department of Applied Social Science).
NOTE: Students who have received credit for PSYC 220, Sec. A or B (1980-81); Sec. B (1981-82); or Sec. A (1982-83) may not take this course for credit.

PSYC 284 ***Socialization*** (3 credits)
Prerequisite: Introductory Psychology or equivalent. This course examines socialization processes during infancy, childhood and adolescence. The effects on socialization of factors such as family structure, disciplinary techniques and social class are considered. The development of social skills, morality, prosocial behaviour and aggression are examined.
NOTE: This course is intended primarily for students in the Family Life Education Certificate programme (Department of Applied Social Science.)
NOTE: Students who have received credit for PSYC 221, Sec. B or C (1980-81); Sec. A (1981-82); or Sec. A (1982-83) may not take this course for credit.

PSYC 286 ***Psychology of Leisure*** (3 credits)
Prerequisite: Introductory Psychology or equivalent. This course explores the rapidly developing psychologically oriented theory and research on leisure and its meaning and importance for the individual. Topics that may be considered include motivation for leisure activities, planning for leisure and/or retirement, therapeutic value of leisure, new conceptions of work and leisure, leisure and self-development.
NOTE: Students who have received credit for PSYC 222, Sec. 60 (1981), Sec. 02 (1981-82) or for Sec. 51 (1982-83), or for PSYC 223, Sec. 60 (1982) may not take this course for credit.

SELECTED TOPICS IN PSYCHOLOGY
The "200" level Selected Topics Courses (PSYC 297; PSYC 298; PSYC 299) are designed as elective courses for students who are not registered in a psychology programme. These courses, which have only Introductory Psychology (usually CEGEP 102 or PSYC 200) or equivalent as a prerequisite, cover a wide variety of areas of contemporary interest. The particular topics vary from session to session and the material is dealt with in a manner appropriate for students who have minimal formal background in psychology. Students registered in a Psychology programme do not normally register for these courses. Students should consult the Psychology Department Course Guide (published yearly) to find out the topic titles for a particular session.
The department also offers "300" and "400" level topic courses for students registered in Psychology programmes. (See below).

PSYC 297 ***Selected Topics in Psychology*** (3 credits)

PSYC 298 ***Selected Topics in Psychology*** (3 credits)

PSYC 299 ***Selected Topics in Psychology*** (6 credits)

PSYC 310 ***Research Methods in Experimental Psychology I*** (3 credits)
Prerequisite: Introductory Psychology or equivalent; PSYC 315 to be taken concurrently. An examination of the experimental method in psychology. Students complete experimental projects to acquaint themselves with procedures in various areas of psychology, such as perception, learning, and motivation. Statistical procedures for analysis of the results of the experiments are presented in the concurrently taught course in psychological statistics. Lectures and laboratory.

PSYC 311 ***Research Methods in Experimental Psychology II*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. PSYC 316 previously or concurrently. This course builds on the experience gained in PSYC 310 and 315. It is devoted to a critical examination of more complex designs used in psychology. Students are required to conduct and evaluate experiments. An opportunity is provided for them to undertake a supervised research project.

PSYC 312 ***Field Research Methodology*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. This course deals with techniques for studying complex behaviour in non-laboratory settings. Topics such as the neutrality or invisibility of the observers, participant observation, categorization, and recording problems may be studied. The relationship between laboratory findings and findings from the non-laboratory setting is considered.

PSYC 315 ***Statistical Analysis in Experimental Psychology I*** (3 credits)
Prerequisite: Three approved credits in Mathematics at CEGEP or university; PSYC 310 to be taken concurrently. This course is an introduction to statistics, presented in an experimental psychology context. Topics dealt with include frequency distributions, measures of central tendency and dispersion, the normal curve, correlation, elementary probability theory, an introduction to hypothesis testing, and the *t* test. These topics are coordinated with the laboratory projects in Research Methods I which must be taken concurrently. *NOTE See §200.7*

PSYC 316 ***Statistical Analysis in Experimental Psychology II*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. This course builds on the experience derived from PSYC 310 and 315 to advance the student's understanding of hypothesis testing and statistical inferences. The material dealt with includes non-parametric statistics, the chi-square and F-distribution, introductory analysis of variance, and various correlational techniques. *NOTE See §200.7*

PSYC 317 ***Introductory Statistical Methods in Psychology*** (6 credits)
Prerequisite: Any two CEGEP courses in Mathematics. Topics dealt with include frequency distributions, measures of central tendency and dispersion, correlation and regression, elementary probability theory, the binomial and normal distributions, sampling and statistical inference, simple analysis of variance, miscellaneous non-parametric techniques. Lectures and laboratory. Only 6 credits will be recognized from PSYC 315, 316, or 317. *NOTE See §200.7*

PSYC 318 ***Advanced Statistical Methods in Psychology*** (6 credits)
Prerequisite: PSYC 315; PSYC 316. (Or PSYC 317 or equivalent.) The course is intended for students who already possess some background in statistics. Knowledge of elementary descriptive and inferential statistics is assumed. The course covers topics such as advanced analysis of variance designs, introductory multivariate analysis, advanced topics in correlation, and regression.

PSYC 320 ***Modern Psychology in Historical Perspective*** (6 credits)
Prerequisite: Introductory Psychology or equivalent. The course deals with the historical background of psychology from ancient and medieval times up to the present. Early contributions to psychology from the fields of philosophy, physics, physiology, and psychophysics are presented and related to the various schools of psychological thought from the late nineteenth century to the modern era.

PSYC 330 ***Developmental Psychology*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. Basic findings and contemporary issues concerned with human cognition, social and emotional development are considered. The course deals with a variety of topics such as the behavioural organization and competence of the new-born, relationships in the pre-school period, effects of different early environments, Piaget's theory of cognitive development.

PSYC 333 ***Social Psychology*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. The behaviour of the individual as a member of a larger grouping or society is dealt with. The study of the social influences on individuals or groups involves consideration of topics such as attitude change and development, intragroup communication and problem solving, leadership, prejudice, development of social movements, and cults.

PSYC 336 ***Personality: Normal and Abnormal*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. The organization, functioning, and development of personality are discussed according to major theories of personality. Evidence from experimental studies and field findings are discussed. Socio-economic, cultural, and biological system factors may also be considered.

PSYC 339 ***Behaviour Disorders*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. The course deals with contemporary research and theory related to the aetiology, diagnosis, and treatment of various psychological

disorder. Psychoneuroses, psychoses, and psychosomatic conditions are studied. Social, learning, and biological influences on the development of such disorders as schizophrenia, depression, anxiety neuroses, and phobias are discussed.

PSYC 343 ***Motivation I*** (3 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. This course reviews and evaluates theories and empirical findings concerning motivation. Topics include the study of motivation in historical perspective, the biological and evolutionary bases of motivation, drive, arousal, and incentive theories of motivation.
NOTE: Students who have received credit for PSYC 342[6] may not take this course for credit.

PSYC 344 ***Motivation II*** (3 credits)
Prerequisite: PSYC 343. This course is a continuation of PSYC 343; it presents a more focused and thorough treatment of selected topics in motivation. These may include sleep, hunger, sex, aggression, altruism, achievement, pain, fear, and play. Different sections of the course may cover different sets of topics.
NOTE: Students who have received credit for PSYC 342[6] may not take this course for credit.

PSYC 346 ***Learning I*** (3 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. This course reviews and evaluates theories and empirical findings concerning basic mechanisms of learning. Topics include the study of learning in historical perspective, Pavlovian conditioning, operant conditioning, reinforcement, stimulus control of behaviour, and the aversive control of behaviour.
NOTE: Students who have received credit for PSYC 345[6] may not take this course for credit.

PSYC 347 ***Learning II*** (3 credits)
Prerequisite: PSYC 346. This course is a continuation of PSYC 346; it presents a more focused and thorough treatment of more advanced topics in learning. These may include developmental aspects of learning, animal memory and cognition, human applications of conditioning principles, biological constraints on learning, or the physiology of learning and memory. Different sections of the course may cover different sets of topics.
NOTE: Students who have received credit for PSYC 345[6] may not take this course for credit.

PSYC 349 ***Sensation and Perception I*** (3 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. Physiological and psychological bases of sensation and perception. Topics such as pitch perception, colour vision, perception of movement, size, and distance are included. The areas of sensation and perception are integrated through a human information-processing approach to the understanding of audition, vision, and other modalities.
NOTE: Students who have received credit for PSYC 348[6] may not take this course for credit.

PSYC 350 ***Sensation and Perception II*** (3 credits)
Prerequisite: PSYC 349. A continuation of PSYC 349. This course examines current topics in the area of sensation and perception with an emphasis on recent research and developments in vision and audition, including areas such as colour vision, space perception, the anatomical and physiological bases of perception, the perception of illusions, and motion perception. Different sections of this course may cover different sets of topics.
NOTE: Students who have received credit for PSYC 348[6] may not take this course for credit.

PSYC 352 ***Cognition I*** (3 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. A course that introduces the general area of cognitive psychology through the presentation and discussion of the theoretical and experimental foundations for our current understanding of how humans acquire and use language. Current research findings and theories in the areas of pattern recognition, attention, memory and imagery are surveyed. Following this introductory course, students should have the necessary background to pursue advanced topics in cognition.
NOTE: Students who have received credit for PSYC 351[6] may not take this course for credit.

PSYC 353 ***Cognition II*** (3 credits)
Prerequisite: PSYC 352. A continuation of PSYC 352 that presents thorough treatments of topics such as cognitive development, psycholinguistics, concept acquisition, reading, speech perception, problem solving and reasoning. Different sections of this course may cover different sets of topics.
NOTE: Students who have received credit for PSYC 351[6] may not take this course for credit.

PSYC 354 ***Mathematical Theories of Behaviour*** (6 credits)
Prerequisite: PSYC 310; PSYC 315. The course surveys applications of mathematical techniques to problems of psychology in such areas as motivation, learning, decision making, sensory psychophysics, and perception. Students enrolling in this course should have a mastery of elementary probability theory and should be confident of their ability to deal with elementary calculus, algebra, and logic.

PSYC 357 ***Physiological Psychology*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or 9 credits in CEGEP-level Chemistry and Biology courses or permission of the Department). This course deals with current theory and research concerning the neural and humoral bases of behaviour. The biological bases of behaviour are clarified

through study of such topics as the function of nerve cells and circuits, brain-hormone interactions, physiological mechanisms of sensation, perception, memory, and coordinated movement.

PSYC 360 ***Brain Chemistry and Behaviour*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or 9 credits in CEGEP-level Chemistry and Biology courses or permission of the Department). Neural systems are classified in terms of their different chemical transmitter substances. The mechanisms of hunger, thirst, pain, reward, drug abuse, and the neurochemical basis of disorders such as schizophrenia, depression, and Huntingdon's Chorea may be discussed. Methods for the identification and selective stimulation and destruction of the various systems are included.

PSYC 361 ***Psychology of Drug Dependence*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. (Or 6 credits from among PSYC 357, PSYC 360 or PSYC 363, or permission of the Department). This course focuses on the behavioural and pharmacological mechanisms underlying the phenomenon of drug dependence. Concepts such as physical and psychological dependence, tolerance, reinforcement and aversion are discussed. In addition the role of these concepts in the development of new treatment procedures is assessed.

PSYC 363 ***Neuroanatomical Bases of Behaviour*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or 9 credits in CEGEP-level Chemistry and Biology courses or permission of the Department). Major emphasis is given towards gaining a knowledge of the structural anatomy and functions of the human central nervous system. Neurological mechanisms subserving human motives, emotions, language, visual-spatial perceptions, etc., are examined. Research related to both animal and human neuropathology is considered.

PSYC 364 ***Introduction to Behavioural Medicine*** (6 credits)
Prerequisite: PSYC 310; PSYC 315. (Or 6 credits from among PSYC 357, 360 or 363). This course surveys some of the areas dealt with by psychologists who conduct research or provide clinical services relating to physical health. The structure of the course reflects the growing recognition that psychological factors can be of major importance for both the development and eventual treatment of physical disorders. The course introduces students to the history and basic concepts of the field and covers psychological aspects of the etiology and treatment of such problems as pain and headache, substance abuse, anxiety and stress, cardiovascular disorders, sexual dysfunction. In discussing treatment emphasis is placed on psychologically-based procedures, though somatic interventions (e.g. medication, diet and surgery) are also reviewed at a level appropriate to the non-medical nature of the course.

PSYC 366 ***Animal Behaviour*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or 9 credits in CEGEP-level Chemistry and Biology courses or permission of the Department). The study of animal behaviour is approached from the point of view of sociobiology, ethology, and comparative psychology. Research findings from the experimental laboratory and from studies of animals in their natural environment are discussed. A study of genetic and evolutionary aspects of behaviour is intrinsic to the course.

PSYC 369 ***Hormones and Behaviour*** (3 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. The course deals with the role of hormones in integrating the activity of various neural, endocrine, and sensory systems to bring about organized, purposeful behaviour. Topics discussed include the reproductive, sexual, or environmentally adaptive systems, with treatment of material ranging from the molecular to the behavioural level.

PSYC 372 ***Psychology of Physical Activity*** (6 credits)
Prerequisite: PSYC 310; PSYC 315. (Or permission of the Department). The relationship between physical and psychological well-being is systematically explored. Topics that may be dealt with include philosophical roots of the mind - body problem, the structural and metabolic basis of both emotional expression and physical activity, the role of aerobic fitness level in altering emotional reaction patterns.

PSYC 375 ***Industrial and Organizational Psychology*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. A systematic examination of current research and theory about human behaviour as it occurs in the context of work organizations. Possible topics are: motivation to work, communication in organizations, career development, and systems approach to conceptualizing the social psychology of organizations.

PSYC 377 ***Abnormal Development*** (3 credits)
Prerequisite: PSYC 310; PSYC 315; 6 credits from among PSYC 330, PSYC 336, PSYC 339 previously or concurrently, or permission of the Department. This course covers major theoretical and applied issues in abnormal child development. Topics covered may include gender and sex-role-related problems, anxiety and fear-related problems, conduct disorders and delinquency, childhood anorexia and obesity, hyperactivity and attentional disorders, learning and school-related problems, mental retardation, and childhood psychosis.

PSYC 378 ***Learning in the Classroom*** (6 credits)
Prerequisite: PSYC 310; PSYC 315. A systematic examination of psychological principles and research reports that contribute to an understanding of learning in the school.

PSYC 379 ***Adolescent Development*** (3 credits)
Prerequisite: PSYC 310; PSYC 315; 6 credits from among PSYC 330, PSYC 336, PSYC 342 or PSYC 351 previously or concurrently. This course examines the physical, cognitive and motivational changes in puberty and early adolescence, their underlying mechanisms, interrelations and behavioural effects. Topics that may be covered include effects of early and late pubertal onset, parent and peer relations, sex differences and sex roles, and identity issues.

PSYC 380 ***Psychology of Aging*** (3 credits)
Prerequisite: PSYC 310; PSYC 315; 6 credits from among PSYC 330, PSYC 333, PSYC 336, PSYC 342 or PSYC 351 previously or concurrently. This course examines psychological development during the later phases of life. The material covered includes methodological issues in the study of aging as well as research findings in such areas as adjustment and well-being, coping styles and stress, age-related changes in memory and learning, the impact of social and family variables on aging, and health and medical issues related to the elderly.

PSYC 381 ***Scaling*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. The theoretical basis and application of scaling methods in psychophysics and social psychology are studied. Quantitative scales for the measurement of attitudes and sensations are derived and constructed. Other topics that may be covered include subjective estimate methods, the law of comparative judgement, unfolding techniques, and signal detection theory.

PSYC 384 ***Measurement*** (3 credits)
Prerequisite: PSYC 310; PSYC 315. A consideration of the general theory of psychological measurement and its application in the development and use of various psychometric instruments such as achievement, intelligence, aptitude, personality, and interest tests. Derived scores, norms, reliability, and validity of these instruments are discussed in the context of general measurement problems in psychology.

PSYC 390 ***Sexual Differentiation*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or Introductory Psychology and completion of 30 credits in any degree programme in Arts and Science or enrolment in the Family Life Education Certificate, or permission of the Department). The genetic, hormonal, and social influences shaping the behaviour of men and women from embryonic life through adulthood are examined. Topics discussed include gender identity, sexuality, aggression, and cognitive abilities. The course, primarily approached from the point of view of women, includes an exploration of some of the myths surrounding the differences between men and women.

PSYC 393 ***Psychology of Language and Communication*** (6 credits)
Prerequisite: PSYC 310; PSYC 315. (Or a minimum of three credits from among TESL 211, LING 200, FRAN 381 or COMS 240 or permission of the Department). The course deals with the cognitive, developmental, and social aspects of language and human communication. Topics discussed may include psychological consideration of modern linguistic theories, child language development, second-language development in children and adults, speech perception, biological basis of language, social psychological aspects of human communication.

PSYC 394 ***Community Psychology*** (6 credits)
Prerequisite: PSYC 310 and PSYC 315 previously or concurrently. (Or Introductory Psychology and completion of 30 credits in any degree programme in Arts and Science, or permission of the Department). The course relates psychology to the day-to-day problems of people in society. The contributions of psychology to community leadership in the study of personal, social, cultural, and ecological arrangements are considered as they relate to such institutions as the family, school, prisons, health and welfare, and political structures.

SELECTED PROBLEMS IN PSYCHOLOGY
The Selected Problems in Psychology (PSYC 398 and PSYC 399) are designed for students enrolled in a Psychology programme. The material is dealt with in a manner that assumes a background in experimental psychology and, in some cases, specific preparation through prior completion of a related course. The minimal prerequisite is PSYC 310 (Research Methods I) and PSYC 315 (Statistical Analysis in Experimental Psychology I). Students should consult the Psychology Department Course Guide (published yearly) for details concerning available courses.

PSYC 398 ***Selected Problems in Psychology*** (3 credits)

PSYC 399 ***Selected Problems in Psychology*** (6 credits)

PSYC 400 ***Advanced Experimental Psychology*** (6 credits)
Prerequisite: PSYC 310, PSYC 311, PSYC 315, PSYC 316 or equivalent, and permission of the Department. The course provides experience in the design, conduct, analysis, and reporting of independent research in the major areas of psychology. The research is undertaken under the supervision of a Faculty member.

PSYC 410 ***Supervised Practicum in Psychology*** (6 credits)
Prerequisite: PSYC 310, PSYC 311, PSYC 315, and/or permission of the Department. A limited number of opportunities for gaining advanced practical experience in various institutional or field-work settings are available. The student activities are closely supervised by a qualified Faculty member.

PSYC 420 ***Honours Seminar*** (6 credits)
Prerequisite: Permission of the Department. Open to final-year Honours students. The seminar deals, in depth, with the research and theory relevant to selected contemporary issues in psychology.

PSYC 430 ***Honours Thesis*** (6 credits)
Prerequisite: Permission of the Department. Open to final-year Honours students. This course requires the student to propose and conduct a study and submit a thesis written according to the APA format. The work is supervised by a Thesis chair selected by the student from within the Department.

PSYC 437 ***Directed Research in Psychology*** (3 credits)
Prerequisite: PSYC 310, PSYC 311, PSYC 315, PSYC 316 or equivalent, and permission of the Department. Under the supervision of a Faculty member, the student carries out an independent research project and reports it in writing. The area of study must be decided upon through consultation with the Faculty member.

PSYC 438 ***Directed Readings in Psychology*** (6 credits)
Prerequisite: Acceptance by a supervisor and confirmation by the Department. This course is designed for the advanced student wishing to do independent, individually supervised literature research on a specific topic in psychology. This research culminates in a written paper. Students should have a well-defined topic in mind before registering for this course.

SPECIAL ADVANCED SEMINARS
Permission of the department is required for registration in the Special Advanced Seminars (PSYC 498 and PSYC 499). These courses are normally open to Specialization and Honours students who are completing their final 30 credits. The usual minimal prerequisite for these specialized courses is PSYC 310, PSYC 311 (Research Methods I & II) and PSYC 315, PSYC 316 (Statistical Analysis in Experimental Psychology I & II). Because the various topics offered are dealt with in depth at an advanced level, specific preparation through prior completion of a related course may also be required.

PSYC 498 ***Special Advanced Seminar*** (3 credits)

PSYC 499 ***Special Advanced Seminar*** (6 credits)

31.270 Religion

Chair
MICHAEL OPPENHEIM, *Associate Professor*

Professors
FREDERICK BIRD
CHARLES DAVIS
MICHEL DESPLAND
JACK LIGHTSTONE
SHEILA McDONOUGH

Hindu Studies Chair
KRISHNA SIVARAMAN, *Professor*

Associate Professors
STEVEN COLLINS
DAVID MILLER
IRA ROBINSON
JOHN ROSSNER

Adjunct Associate Professors
JACK B. LIGHTMAN
DAVID ROME

Adjunct Assistant Professor
HOWARD JOSEPH

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

60 BA Honours in Religion

6 RELI 211[6]
6 RELI 213[6] or 222[6]
12 From one of three areas of specialization:
A. *Asian Religions:*
Chosen from RELI 313[6], 314[3], 315[3], 316[3], 317[3], 318[3], 319[3], 320[3], 321[3], 322[3], 323[3], 324[3], 325[3], 359[3], 360[3], 374[3]
B. *Christianity:*
Chosen from RELI 301[3], 302[3], 361[6], 362[6], 363[6]
C. *Judaism:*
Chosen from RELI 301[3], 302[3], 326[3], 327[3], 328[3], 330[3], 350[3], 351[3], 352[3], 353[3], 354[3], 355[3], 356[3], 357[3], 358[3]
6 From courses specified in a second area above
6 Chosen from RELI 331[3], 332[3], 333[3], 334[3], 341[6], 342[6], 343[3], 380[6]
6 RELI 410[6]
6 RELI Elective credits at 300 or 400 level
12 Elective credits in RELI or related Discipline (in consultation with Departmental Adviser)

42 BA Major in Religion

6 Chosen from RELI 211[6], 213[6], 311[6], 313[6], 314[3], 315[3], 316[3], 317[3], 318[3], 319[3]
6 Chosen from RELI 222[6], 301[3], 302[3], 326[3], 327[3], 328[3], 330[3], 361[6], 362[6], 363[6]
30 RELI elective credits at the 300 or 400 level

30 Minor in Religion

30 RELI elective credits (in consultation with the Departmental Adviser)

60 BA Honours in Judaic Studies

18 Chosen from RELI 201[6]; HEBR 210[6], 211[3], 250[6], 251[3], and appropriate HEBR elective credits (chosen in consultation with the Departmental Adviser)
6 Chosen from RELI 211[6], 213[6]
6 RELI 222[6]
9 Chosen from RELI 301[3], 326[3], 327[3], 328[3], 330[3]
9 Chosen from RELI 298[3], 350[3], 351[3], 352[3], 353[3], 354[3], 355[3], 356[3], 357[3], 358[3], 394[3], 395[3], 396[3], 397[3], 398[3], 401[3]
6 Chosen from RELI 302[3], 313[6], 361[6], 362[6], 372[3]
6 RELI 400[6]

120 Bi-University Major in Judaic Studies

By agreement between the University and Bar-Ilan University, Ramat-Gan, Israel, students may be admitted to a 120-credit bi-University programme designed to provide the academic base for prospective teachers in Jewish Studies programmes at the primary, elementary, and junior high school levels in Canada. Admission to the programme depends upon acceptance by both universities. Successful applicants may spend up to the first 24 months (i.e., two regular and two summer sessions) at Bar-Ilan. The rest of the requirements for the degree must be completed at Concordia while the student is registered in the BA Major in the Judaic Studies programme. Further information on the programme may be obtained from the Department of Religion.

42 BA Major in Judaic Studies

12 Chosen from RELI 201[6]; HEBR 210[6], 211[3], 250[6], 251[3]
6 Chosen from RELI 211[6], 213[6]
6 RELI 222[6]
9 Chosen from RELI 301[3], 326[3], 327[3], 328[3], 330[3]
3 Chosen from RELI 298[3], 350[3], 351[3], 352[3], 353[3], 354[3], 355[3], 356[3], 357[3], 358[3], 394[3], 395[3], 396[3], 397[3], 398[3], 401[3]
6 Chosen from RELI 302[3], 313[6], 361[6], 362[6], 372[3]

NOTE: By agreement between the University and Bar-Ilan University, Ramat-Gan, Israel, students in this programme may take up to 30 Concordia-equivalent credits at Bar-Ilan. They must, however, meet the requirements for the Major; at least 12 credits of course work in Judaic Studies must be taken at Concordia.

30 **Minor or Certificate in Judaic Studies**
6 Chosen from RELI 211[6], 213[6]
6 RELI 222[6]
9 Chosen from RELI 301[3], 326[3], 327[3], 328[3], 330[3]
9 Chosen from RELI 298[3], 350[3], 351[3], 352[3], 353[3], 354[3], 355[3], 356[3], 357[3], 358[3], 394[3], 395[3], 396[3], 397[3], 398[3], 401[3]

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

NOTE: Students in the Honours programme may take RELI 398 up to three times, provided that the subject matter of each RELI 398 course is different and approval of the Department Adviser has been given. Students in the Major and Minor programmes may take RELI 398 twice, provided that the subject of each RELI 398 course is different and approval of the Department Adviser has been given.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

RELI 201 ***Classical Hebrew*** (6 credits)
A study of the language of the classical Hebrew texts. The course is designed as a preparation for reading the Hebrew Bible, but takes account of other texts.

RELI 211 ***Understanding Religion*** (6 credits)
A systematic and topical introduction to the study of religion. The purpose of the course is to enable the student to articulate and investigate questions about the meaning and nature of religion. Problems discussed include the elements of religious experience, forms of religious expression and interpretation, religious communities and practices, and the questions raised by the contemporary interfaith dialogue. Materials are taken from a variety of religious traditions.

RELI 213 ***Major Religious Traditions of the World*** (6 credits)
A historical and comparative overview of the major religious traditions of the world: Judaism, Christianity, Islam, Hinduism, Buddhism, and Chinese religions. The course includes some consideration of the new religions in North America.

RELI 222 ***Judaic Studies: History of Judaism*** (6 credits)
A historical survey of the Jewish religion from the Biblical Age until the beginning of the modern period. The survey focuses on the sociological, historical, and the intellectual settings of the Jewish people. The emphasis is on the formation and continuation of the major Jewish concepts, constitutions and traditions.

RELI 298 ***Selected Topics in Religion*** (3 credits)

RELI 299 ***Selected Topics in Religion*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

RELI 301 ***Biblical Studies I: The Hebrew Bible*** (3 credits)
An introduction to the methods and results of Biblical scholarship with regard to the history, culture, and religion of Ancient Israel. Particular attention is given to the major religious affirmations and theological concepts of the Hebrew Bible that have become central in the subsequent development of Judaism.

RELI 302 ***Biblical Studies II: The New Testament*** (3 credits)
An introduction to the methods and results of contemporary New Testament scholarship; a critical survey of New Testament literature considering historical setting, history of text, religious and cultural significance. Attention is given to the central issues and concepts portrayed in the Synoptic, Johannine, and Pauline writings and their importance in the subsequent development of the Western religious tradition.

RELI 313 ***Islam*** (6 credits)
A study of the rise and development of Islamic religion and culture from its beginnings in the seventh century to modern times.

RELI 314 ***The Buddhist Tradition*** (3 credits)
An introduction to the Buddhist tradition examining basic elements present throughout most Buddhist sects, such as: the life of the Buddha; the ethical, intellectual and meditative commitments of the aspirant; worship, and the relation of the Buddhist community to the secular government.

RELI 315 ***Mahayana Buddhism*** (3 credits)
A study of the Mahayana Buddhist vision of the ideal life. Principal topics include the scriptures in which this vision is articulated, the philosophy through which it is systematized, the ethical and meditative practices through which it may be realized, and the eventual state of Buddhahood.

RELI 316 ***Chinese Religion*** (3 credits)
An examination of the religious life of the Chinese people. Emphasis is placed upon the way in which each

community, family, and individual draws upon the common stock of religious elements (Confucian, Taoist, Buddhist, Shamanistic) to forge a religion suited to its needs.
NOTE: Students who have received credit for RELI 312 may not take this course for credit.

RELI 317 ***Tibetan and Japanese Religious Thought and Institutions*** (3 credits)
A study of the development of new religious forms from the synthesis of imported religions and indigenous practices in Tibet and Japan.
NOTE: Students who have received credit for RELI 312 may not take this course for credit.

RELI 318 ***Religion and Art in India, China and Japan*** (3 credits)
An introduction to the religious art of India, China and Japan from earliest times to the present. The course focuses upon the relationship between the visual arts (architecture, sculpture and painting) and religious world views and mythological symbols that provide the basis for the artistic form.

RELI 319 ***Modern Islam*** (3 credits)
Prerequisite: RELI 313 or permission of the Department. A study of Islamic religious and social thought in nineteenth and twentieth century. Islamic liberalism, traditionalism and fundamentalism are compared and contrasted.

RELI 320 ***Hindu Thought and Institutions in the Ancient Period (1500-2000 B.C.)*** (3 credits)
Prerequisite: RELI 213, or permission of the Department. An introduction to the religious thought and institutions of Ancient India, as depicted in Vedic literature, with primary emphasis upon the Upanisads. Although topics may vary from year to year, attention is given to Vedic world views, rituals and characteristic religious institutions, such as the Brahmanical sacrificial cult and the Upanisadic philosophical/ascetic schools.

RELI 321 ***Hindu Thought and Institutions at the Beginning of the Medieval Period*** (3 credits)
Prerequisite: RELI 213, or permission of the Department. The focus of this course is upon the Bhagavad Gita as the principal text that mediates between the Vedic Period and the later developments of Hindu sectarianism, characteristic of the Medieval Period. The religious thought and the various theories of action (Yogas) are analyzed using commentaries written by classical and contemporary authors and interpreters.

RELI 322 ***The Saiva Traditions of Hinduism*** (3 credits)
Prerequisite: RELI 213, or permission of the Department. A survey of the histories, doctrines and cults of Saivism as a characteristic development of the Medieval Period, with special emphasis upon the Saiva Siddhanta and the Kasmiri Saiva traditions.

RELI 323 ***The Vaisnava Traditions of Hinduism*** (3 credits)
Prerequisite: RELI 213, or permission of the Department. A survey of the histories, doctrines and cults of Vaisnavism as another characteristic development of the Medieval Period, with special emphasis upon the Sri Vaisnava tradition of South India and the Caitanya tradition of North India.

RELI 324 ***Vedantic Philosophies and Institutions*** (6 credits)
Prerequisite: RELI 213, or permission of the Department. An analysis of the Advaita Vedanta philosophy of Sankara (788-820 B.C.) and of the monastic/ascetic orders founded by Sankara. Consideration is also given to criticism of Sankaran thought and institutions by such medieval writers as Ramanuja, Madhva and post-Sankara Advaitins, and by contemporary interpreters of Vedantic thought and institutions.

RELI 325 ***Religion and Society in India*** (3 credits)
An introduction to the historical and sociological study of Hindu society, examining such problems as the development of class and caste as basic social structures, roles of men and roles of women, marriage patterns, relationships between political rulers and religious structures, and between Hindu and non-Hindu communities, concluding with an analysis of the role of Hinduism in a modern, pluralistic, secular India.

RELI 326 ***Classical Judaism*** (3 credits)
The concepts, institutions and literature of classical rabbinic Judaism (circa 70-700 C.E.) viewed against rabbinism's biblical and pharisaic background and in the context of the world of Late Antiquity. The course examines the development of rabbinic systems of thought and law as preserved primarily in the Mishnah and the Talmud. Consideration is given as well to popular rabbinic beliefs and practices and to early rabbinic mysticism.

RELI 327 ***Medieval Jewish Thought and Institutions*** (3 credits)
Topics in the intellectual, religious, and social history of selected Jewish communities during the Middle Ages. Both internal Jewish developments and changing Jewish relations with their non-Jewish neighbours are considered.

RELI 328 ***Modern Jewish Thought and Institutions I (1780-1880)*** (3 credits)
A survey of the social and intellectual currents which shaped Jewish modernism from the beginning of emancipation until 1880. Topics include: the emergence of modern Jewish consciousness, Jewish pluralism, and religious differentiation within Jewish society (Haskalah, Hasidism, science of Judaism, orthodoxy, reform, and conservatism), secular versus religious values, disintegration, and unification within the Jewish community.

RELI 330 ***Modern Jewish Thought and Institutions II (1880 to the present)*** (3 credits)
A survey of social and intellectual currents in Jewish society from 1880 until the present. Topics include: the impact of anti-Semitism, particularism and universalism, nationalism and its critics, Jewish existentialism and the new mysticism (Rosenzweig, Buber, Rabbi Kook), reactions to the holocaust, and the relationship between Israel and the diaspora.

RELI 331 ***Contemporary Ethical Issues: Personal*** (3 credits)
This course identifies and analyzes ethical issues arising at the personal level today. Issues are discussed in the context of the inter-relationship between moral values and religious convictions. Topics vary from year to year, but some examples of areas that raise ethical and religious questions for personal existence are: affluence, alienation, work, leisure, aging, drugs.

RELI 332 ***Contemporary Ethical Issues: Societal*** (3 credits)
This course identifies and analyzes ethical issues arising from social groups today. In discussing the issues, account is taken of the bearing of religious institutions and traditions upon social attitudes and problems. Topics vary from year to year, but examples of problem areas that have evoked ethical and religious debate are: economic and social inequality, race relations, violence and war, hunger and poverty, population growth.

RELI 333 ***Women and Religion I*** (3 credits)
An examination of the roles and images of women in the history of religions. Topics might include: the development of patriarchal religion, religion and sexuality, women and myth, the roles of women in different religious communities. This course includes an integrated sequence of lectures (minimum, three weeks) by an anthropologist on matriarchal and patriarchal societies.

RELI 334 ***Women and Religion II*** (3 credits)
An examination of the religious and ethical questions raised by contemporary discussions of women's experience. Topics might include: the recent beginnings of a feminist theology, the feminist critique of organized religion and society, the effects of male perspective upon philosophy and theology, and women in the ministry.

RELI 335 ***Sexuality in the History of Religions*** (6 credits)
A study of religious attitudes towards human sexuality using materials drawn from a variety of religious traditions, with special attention to such topics as: incest taboos, adultery, celibacy, ritualized sexual acts, and patterns of marriage.

RELI 341 ***Religion and Literature*** (6 credits)
This course deals with the questions raised for the study of religion by works of literature. An account is given of the recent development of interdisciplinary studies in religion and literature, and of the problems of method that have arisen. The relation between the interpretation of religious language, with its use of myth, parable, symbol and metaphor, and literary criticism is explored. The religious implications, direct and indirect, of selected literary works are discussed.

RELI 342 ***Religion and Science*** (6 credits)
A historical investigation of the reasons for the conflict between religion and science in Western culture, and an examination of the chief issues involving both science and religion still under discussion today.
NOTE: Students who have received credit for RELI 443 may not take this course for credit.

RELI 343 ***Major Psychological Theories of Religion*** (3 credits)
This course focuses upon such major psychological theories of Religion as evinced in the writings of William James, Sigmund Freud, C.G. Jung, Erik Erikson and Abraham Maslow.

RELI 350 ***The Bible and the Ancient Near East*** (3 credits)
The significance of Old Testament institutions within the context of the ancient Mediterranean world. Law, covenant, writing, historiography, the relationship between the individual and God, sin, sacrifice, and atonements are discussed. Readings from contemporary literature in translation (Babylonian, Egyptian, Greek, Hittite, Ugarite).
NOTE: Students who have received credit for RELI 325 may not take this course for credit.

RELI 351 ***Judaism in the Hellenistic Age*** (3 credits)
An examination of the cultural interaction between Judaism and Hellenism from the third century B.C.E. to the fifth century C.E. Particular attention is given to modes of cultural fusion and syncretism evident between Jews and various Hellenistic groups both in the Land of Israel and the Diaspora. Topics include Philo of Alexandria; Josephus; Hellenistic Jewish Gnosticism; Jewish magicians; cults of the dead; Judaic art and artifacts.

RELI 352 ***Sephardic Judaism*** (3 credits)
A critical analysis of the religious traditions peculiar to Sephardic Jews. Particular attention is given to North African Judaism.
NOTE: Students who have received credit for RELI 329 may not take this course for credit.

RELI 353 ***Jews and Christians: the Historical Encounter*** (3 credits)
A historical survey of the relationship between Judaism and Christianity. The circumstances of the birth of

Christianity and its separation from Judaism are discussed as well as the development of inter-religious disputation and dialogue. Special emphasis is given contemporary manifestations of the Judeo-Christian encounter.

RELI 354 ***The Mystical Tradition in Judaism*** (3 credits)
A survey of the Jewish mystical tradition, including the development of the messianic idea, Merkava mysticism, Hasidei Ashkenaz, Kabbala in Provence and Spain, Lurianic Kabbala, Sabbatianism and Hasidism. Emphasis in this course is placed on the study of representative Jewish mystical texts.

RELI 355 ***Modern Jewish Identity*** (3 credits)
The questions "Who is a Jew?" and "What does it mean to be a Jew?" arose at the time of the Emancipation, that is, with the entry of Jews into the social, political, and intellectual life of Europe at the end of the eighteenth century. This class explores the models of Jewish identity that were offered from the time of Moses Mendelssohn to the contemporary period. The course also focuses on the intellectual trends as well as the historical events that helped to shape Jewish self-understanding.

RELI 356 ***Jewish Communities in North America: Their Historical Development and Religion*** (3 credits)
This course examines the historical development of the Jewish community of North America and analyzes the dynamics of Judaism on this continent. Questions raised in this course include: Is there an "American" Judaism? In what respect is the North American Jewish experience a continuation of past Jewish experience and in what way is it a new phenomenon in Jewish history?

RELI 357 ***Holocaust: Historical Circumstances*** (3 credits)
This course examines the historical circumstances that made possible the systematic destruction of European Jewry in the years 1939-45 as well as the process of destruction and the Jewish and world responses to that destruction.

RELI 358 ***Holocaust: Theological Ramifications*** (3 credits)
This course examines the theological ramifications of the Holocaust in Jewish and Christian thought. Issues discussed include the problem of evil; suffering; the election of Israel; God's relation to the course of human events.

RELI 359 ***Hindu Identity in a Pluralistic Society*** (3 credits)
An analysis of the problems facing Hindus who wish to maintain their religious identities in a pluralistic, Western society, such as Canada.

RELI 360 ***Hindu Religious Organizations in Canada*** (3 credits)
A historical and sociological analysis of some of the Hindu religious organizations that have been created in Canada in order to meet the religious needs of Hindus in Canada.

RELI 361 ***Studies in the History of Christian Thought*** (6 credits)
An introduction to the classics of Christian thought from the Fathers to the modern period. Authors studied at length may vary from year to year, but, in any case, students acquire a basic knowledge of Augustine, Aquinas, Luther, and Calvin.

RELI 362 ***Questions from the Christian Tradition*** (6 credits)
A study of some of the major religious questions and controversies in the history of the Christian West. The questions chosen vary, but examples are: grace and free will, faith and reason, history and eschatology, church and state, contemplation and action.

RELI 363 ***Religion in Canada*** (6 credits)
The historical development of the major religious traditions in Canada, their influence on the social, political, and cultural areas of Canadian life and their contemporary significance. Attention is also focussed on the inter-action of Catholic, Protestant, Jewish, Indian, and Eskimo groups.

RELI 370 ***Death and Dying*** (6 credits)
A comparative examination of conceptions of death and dying among the major religious traditions. Attention is paid as well to exploring contemporary notions of death and dying both in so far as we are still informed by traditional conceptions, and to the extent that, for many, such notions have lost their cogency.

RELI 371 ***Religion and Healing*** (3 credits)
An examination of the interaction between religious conceptions and practices on the one hand and healing arts on the other. The course considers such phenomena as: shamanism; healing and Christian shrines; native healing rites, folk medicine of the third world; modern spiritual healing groups; the contemporary dialogue between established forms of medicine, psychiatry and religion in the twentieth century.

RELI 372 ***The Human Body in Religious Faith and Practice*** (3 credits)
A study of 1) the attitudes to the human body in various religious traditions; 2) the impact of the body-mind problem upon religious conceptions of human life and destiny; 3) the body as the foundation of religious symbolism and ritual.

RELI 373 ***Comparative Mysticism*** (3 credits)
This course introduces students to the study of mysticism and mystical experience using materials drawn from a wide range of cultural and religious sources and examining the work of such contemporary theorists as William James, Rudolph Otto, W.T. Stace, R.C. Zaehner and Robert Ellwood.

RELI 374 ***Islamic Mysticism*** (3 credits)
Prerequisite: RELI 313 or permission of the Department. A study of the major themes of Islamic mystical thought as expressed in philosophical writings and in poetry.

RELI 376 ***Religion, Myth and Magic in Classical Antiquity*** (3 credits)
An examination of the interaction and significance of religion, myth and magic in classical antiquity, in the East and the West, as discernible in such cultures as: Ancient Egypt, Babylon, India, China, Israel, Greece and Rome through the beginnings of the Christian era and the Medieval period.
NOTE: Students who have received credit for RELI 364 may not take this course for credit.

RELI 377 ***Religion and Occult Ideas in Modern History*** (3 credits)
An examination of the basic ideas and cultural impact of occult traditions in the modern period from the so-called "Rosicrucian Enlightenment" in the sixteenth and seventeenth centuries, as described by Frances Yates, to the nineteenth- and twentieth-century resurgence of occult themes in what Robert Ellwood has called "an alternative reality tradition in the West."
NOTE: Students who have received credit for RELI 364 may not take this course for credit.

RELI 378 ***Religion and the History of Psychical Research*** (3 credits)
A review of the history of psychical research (including discoveries, claims, limitations and problems) from the foundation of the British and American Societies for Psychical Research in the nineteenth century through the establishment of contemporary "experimental parapsychology" in the West and behind the Iron Curtain. An evaluation of the possible significance of this material for comparative studies in the philosophies of religion and science.
NOTE: Students who have received credit for RELI 465 may not take this course for credit.

RELI 379 ***Religion and Contemporary Psychic Experience*** (3 credits)
An examination of the contemporary varieties of psychic experience being claimed by persons in the modern world and reported in popular literature, sociological surveys and medical or psychological literature. This material is critically evaluated in the light of the theories of C.G. Jung, William James and others.
NOTE: Students who have received credit for RELI 465 may not take this course for credit.

RELI 380 ***Comparative Religious Ethics: West and East*** (6 credits)
This course identifies the ways in which different religious and ideological traditions from West and East consider and deal with ethical issues. Examples of such traditions are: Navaho, Jewish, Christian, Islamic, Hindu, Buddhist, Confucian, Humanist, Communist. The ethical values and ideals found in these traditions, and their influence upon individual life patterns and social organization, are considered.
NOTE: Students who have received credit for RELI 435 may not take this course for credit.

RELI 393 ***Special Topics in Religion and Culture*** (3 credits)
Prerequisite: Permission of the Department. This course affords an opportunity for the advanced student to study a special theme or problem in Religion and Culture.

RELI 394 ***Special Topics in Biblical Studies*** (3 credits)
This course examines a selected book or theme of the Hebrew Bible with a discussion of current research. The course focuses on critical methodology and its application.
NOTE: Students who have received credit for RELI 395 may not take this course for credit.

RELI 395 ***Special Topics in Ancient Judaism*** (3 credits)
Prerequisite: Permission of the Department. This course examines a selected issue or area of concern in Ancient Judaism with a discussion of current research. Possible topics are: the Dead Sea Scrolls, the Formation of the Mishna, Alexandrian Jewry.
NOTE: Students who have received credit for RELI 396 may not take this course for credit.

RELI 396 ***Special Topics in Medieval Judaism*** (3 credits)
Prerequisite: Permission of the Department. This course examines a selected issue or area of concern in medieval Judaism. Possible topics may include: Hasidism, Codification of Halakha, messianic thought and movements.
NOTE: Students who have received credit for RELI 397 may not take this course for credit.

RELI 397 ***Special Topics in Modern Judaism*** (3 credits)
Prerequisite: Permission of the Department. This course examines a selected issue or area of concern in modern Judaism. Possible topics may include: the rise of Reform Judaism, the encounter between Judaism and modern Philosophy, Zionist thought.
NOTE: Students who have received credit for RELI 398 may not take this course for credit.

RELI 398 ***Selected Topics in Religion*** (3 credits)

RELI 399 ***Selected Topics in Religion*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

RELI 400 ***Honours Seminar in Judaic Studies*** (6 credits)
This course is open only to Honours students in Judaic Studies. The student works with an individual faculty member in a particular area of Judaic Studies. Students are asked to produce a sustained piece of written work to be read by their adviser and at least one other member of the Department.

RELI 401 ***Advanced Studies in Classical Jewish Texts*** (3 credits)
This course is based on representative readings from Biblical, post-Biblical, and medieval Hebrew literature. It concentrates on specific topics and pays attention to the historical and philosophical background of the texts.

RELI 410 ***Honours Seminar in Religion*** (6 credits)
This course is open only to Honours students in Religion. The student works with an individual faculty member in a particular field of Religious Studies. Students are asked to produce a sustained piece of written work to be read by their adviser and at least one other member of the Department.
NOTE: Students who have received credit for RELI 499 may not take this course for credit.

RELI 491 ***Special Seminar*** (6 credits)
Prerequisite: Permission of the Department. Subject matter varies from year to year to take advantage of the special interests of the seminar leader. This course provides opportunities to senior students for discussion and advanced study.

RELI 493 ***Religious Institutions*** (3 credits)
Prerequisite: Permission of the Department. Seminar on a particular period or institution in the history of religion.

RELI 495 ***Religious Thinkers*** (3 credits)
Prerequisite: Permission of the Department. Seminar on a particular thinker or school of thought in the history of religion.

RELI 498 ***Advanced Topics in Religion*** (3 credits)

RELI 499 ***Advanced Topics in Religion*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.280 Russian Studies

Concordia offers a Minor programme in Russian Studies for students interested in the politics, economics and history of Russia. The language component of the programme is designed to establish basic skills required for scholarly work in Russian. Courses are offered by specialists in the respective disciplines. See separate departmental entries for details on courses in the programme.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

24 Minor in Russian Studies*

6 RUSS 330[6]
6 HIST 377[3], 378[3]
12 Chosen from ECON 370[6]; HIST 441[6]; PHIL 334[3], 335[3]; POLI 323[3], 333[3], 436[6]; POLI 475[3]**; RUSS 400[6]

**Admission suspended for 1991-92.*
***This course is given alternate years.*

31.290 Science/Mathematics for Teachers

CERTIFICATE IN THE TEACHING OF SCIENCE (Elementary School Level)

Programme Director
FLORENCE STEVENS, *Associate Professor and Vice-Dean*

The Faculty of Arts and Science offers a Certificate in the Teaching of Science (Elementary School Level) for the professional development of teachers interested in science. Practising teachers are offered the opportunity to improve their knowledge of science in order to help them teach modern science more effectively. The presentation will generally be in workshop form, with emphasis on assignments that develop activities for classroom use. Courses will be offered on and off campus during the Winter and Summer months, subject to sufficient demand and the availability of suitable instructors.

Admission Requirements
Admission to this programme is open to teachers who already hold either a General Elementary Licence or an Elementary Special Education Licence. Under certain conditions individuals certified to teach at the Secondary level may be admitted into this programme depending on their educational background and teaching experience.

30 Certificate in the Teaching of Science (Elementary School Level)
30 SCIE 315[6], 316[6], 317[6], 318[6], 319[6]
NOTE: Where students have completed similar courses in previous studies, pro tanto credits may be approved up to a maximum of 12 credits. In some cases, students with fewer than 12 pro tanto credits may, with approval of the Faculty of Arts and Science obtained upon the recommendation of the programme director, be permitted to take courses in related areas for credit towards the certificate. However, at least 18 of the credits must be taken within the programme.
Science courses in this programme have been renumbered.

SCIE 315 ***Philosophy and Methodology of Teaching Science, Elementary Level*** (6 credits)
A study of the role, impact, and responsibility of science at the elementary school level, a study of science programme design, teaching processes, and classroom activities at the elementary level.
NOTE: This course is available only to practising teachers.
NOTE: Students who have received credit for SCIE 314 may not take this course for credit.

SCIE 316 ***Matter and Energy*** (6 credits)
Prerequisite: SCIE 315. States and properties of matter, change of state, force, common machines, mass, volume, expansion, gravitation, heat, light, sound, electricity, magnetism, other sources of energy, conservation of energy.
NOTE: This course is available only to practising teachers.
NOTE: Students who have received credit for SCIE 310 may not take this course for credit.

SCIE 317 ***The Human Environment*** (6 credits)
Prerequisite: SCIE 315. Temperature, soil, water, air, atmosphere, reproduction, heredity, erosion, weather, nitrogen cycles, pollution, ecology and ecosystems.
NOTE: This course is available only to practising teachers.
NOTE: Students who have received credit for SCIE 311 may not take this course for credit.

SCIE 318 ***Our Earth and the Universe*** (6 credits)
Prerequisite: SCIE 315. Time cycles, volume, density, constitution, and properties of the solar system, gravity, seasons, water, and carbon cycles.
NOTE: This course is available only to practising teachers.
NOTE: Students who have received credit for SCIE 312 may not take this course for credit.

SCIE 319 ***Living Things and Their Activities*** (6 credits)
Prerequisite: SCIE 315. The cellular structure of living things, food chains, plants, animals, germination, growth, soil, water, respiration, nutrition, life cycles. Classification into families, communities, and populations.
NOTE: This course is available only to practising teachers.
NOTE: Students who have received credit for SCIE 313 may not take this course for credit.

CERTIFICATE IN MATHEMATICS FOR TEACHERS (Elementary School Level)

Programme Director
STANLEY ERLWANGER, *Associate Professor*

Admission Requirements
Admission to this programme is open to teachers who already hold either a General Elementary Licence or an Elementary Special Education Licence. Under certain conditions individuals certified to teach at the Secondary level may be admitted into this programme depending on their educational background and teaching experience.

The Department of Mathematics and Statistics offers a Certificate in Mathematics for Teachers (Elementary School Level) for the professional development of teachers interested in mathematics. This programme was designed in accordance with the programme-cadre for Elementary Mathematics issued by the General Directorate of Elementary and Secondary Education and approved for "perfectionnement" by the Higher Education Branch of the Department of Education on February 15, 1974.

Practising teachers are offered the opportunity to improve their knowledge of mathematics in order to help them teach mathematics more effectively. The presentation will generally be in workshop form with emphasis on assignments which develop activities for classroom use. Courses will be offered on and off campus during the Winter and Summer months subject to demand and the availability of instructors.

30 Certificate in Mathematics for Teachers (Elementary School Level)
6 MATH 305^6
24 Chosen from MATH 300^6, 301^6, 302^6, 303^6, 304^6, 307^3, 309^3

NOTE: Where students have completed similar courses in previous studies, pro tanto credits may be approved up to a maximum of 12 credits. In some cases, students with fewer than 12 pro tanto credits may, with approval of the Faculty of Arts and Science obtained upon the recommendation of the programme director, be permitted to take courses in related areas for credit towards the certificate. However, at least 18 of the credits must be taken within the programme.

CERTIFICATE IN MATHEMATICS FOR TEACHERS (Junior Secondary School Level)

Programme Director
STANLEY ERLWANGER, *Associate Professor*

Admission Requirements
Admission to this programme is open to teachers who already hold a teaching licence at the secondary level. This licence may be a generalist licence or a mathematics specialist licence.

The Department of Mathematics and Statistics offers a Certificate in Mathematics for teachers who teach mathematics at the junior high school level. Some of the courses offered have been specially designed to deal with new subject matter which is being introduced into the secondary school curriculum, as well as with aspects of mathematical pedagogy necessary for the teaching of this material. This programme was approved for perfectionnement on February 14, 1974, by the Higher Education Branch of the Department of Education.

30 Certificate in Mathematics for Teachers (Junior Secondary School Level)
15 MATH 400^3, 401^6, 404^6
15 Chosen from MATH 402^3, 403^3, 405^3, 406^3, 408^3, 409^3, 410^3, 411^3, 417^3, 419^3

NOTE: In some cases where students have completed similar mathematical courses in previous studies, the Mathematics and Statistics Department may modify a student's programmes to meet his professional requirements. It may grant pro tanto credits up to a maximum of 12 credits.

MATH 300 ***Mathematics for Elementary School Teachers I*** (6 credits)
This course and the following course (301) are designed to cover the main mathematical topics in the programme-cadre for elementary schools. In both courses, the study of the mathematical content is linked to thorough consideration of classroom applications. A project is included among the assignments in both courses. In both courses, the mathematical language of sets, relations, functions, and operations is applied where appropriate, and various modes of graphical representation used. Counting numbers and systems of numeration, number operations, factors and multiples, numbers as measures, classification and properties of geometrical shapes.
NOTE: This course is available only to practising teachers.

MATH 301 ***Mathematics for Elementary School Teachers II*** (6 credits)
This course and the preceding course (300) are designed to cover the main mathematical topics in the programme-cadre for elementary schools. In both courses, the study of the mathematical content is linked to thorough consideration of classroom application. A project is included among the assignments in both courses. In both courses, the mathematical language of sets, relations, functions, and operations is applied where appropriate, and various modes of graphical representation used.
The extension of the number system to fractions, decimals, and signed numbers. Equalities and inequalities, bases of symmetry and geometric transformations.
NOTE: This course is available only to practising teachers.

MATH 302 ***Transformation Geometry*** (6 credits)
Prerequisite: MATH 301 or permission of the Department. A more advanced study of symmetry and geometric transformations, applications in 2 and 3 dimensions, an overview of a K-6 programme of geometry.
NOTE: This course is available only to practising teachers.

MATH 303 ***Measurement*** (6 credits)
Prerequisite: MATH 300 or permission of the Department. A more advanced study of measures and measurement, descriptive statistics, and elementary notions of probability, an overview of a K-6 programme of measurement.
NOTE: This course is available only to practising teachers.

MATH 304 ***Mathematics for Elementary School Teachers III*** (6 credits)
Prerequisite: Permission of the Department. More advanced mathematical studies to meet the needs of potential developments in the elementary school curriculum.
NOTE: This course is available only to practising teachers.

MATH 305 ***Psychology of Mathematics Education*** (6 credits)
Prerequisite: Any three chosen from MATH 300, 301, 302, 303, 304; or permission of the Department. The content of the course is selected from those areas of psychological theory and research which have implications for the teaching of mathematics. It normally includes: psychological theories of cognition, studies of mathematical learning in children, motivation, applications of research to the classroom.
NOTE: This course is available only to practising teachers.

MATH 307 ***Microcomputer Applications to Mathematics Education I*** (3 credits)
Prerequisite: Permission of the Department. Elements of programming of the LOGO language. An introduction to TURTLE graphics. Recursion as a simplifying and generating tool. Applications to the teaching of elementary arithmetic and geometry. Design of programmes to produce graphic displays and simple instructional sequences.
NOTE: This course is available only to practising teachers.

MATH 309 ***Microcomputer Applications to Mathematics Education II*** (3 credits)
Prerequisite: MATH 207* or permission of the Department. More advanced programming in the LOGO language. Further study of TURTLE graphics. List processing, editing and developing procedures. Applications to the teaching of algebra and geometry. Production of inter-active programmes. Consideration of LOGO as an educational environment.
**For a description of MATH 207 please see §31.200*
NOTE: This course is available only to practising teachers.

MATH 400 ***Seminar on the Teaching of Mathematics*** (3 credits)
Prerequisite: Permission of the Department. This course is conducted in the form of a workshop and examines alternative methods of presentation of mathematical ideas at the secondary school level. It studies relevant aspects of the psychological development of the adolescent in the context of existing mathematics curricula.
NOTE: This course should be taken at the end of the programme and is available only to practising teachers.

MATH 401 ***Functions*** (6 credits)
Prerequisite: Permission of the Department. This course examines the topics in a traditional functions course: the concept of a function and its inverse. Linear and quadratic functions, rational functions, exponential, logarithmic, and trigonometric functions. Graphing is stressed. An historical overview is given. Methods of teaching these topics and of preparing secondary school students for a functions course are discussed.
NOTE: This course is available only to practising teachers.

MATH 402 ***Algebra I*** (3 credits)
Prerequisite: MATH 401 or equivalent previously or concurrently. Progressions, combinations, permutations, Bionomial Theorem, mathematical induction, inequalities, polynomials, cartesian and polar forms of complex numbers; conics.
NOTE: This course is available only to practising teachers.

MATH 403 ***Calculus I*** (3 credits)
Prerequisite: MATH 401, or equivalent. Functional notation, limits, and continuity. Differentiation of polynomials. The power, product, quotient, and chain rules. Implicit differentiation. Higher derivatives. Mean value theorem, Rolles theorem. Maxima and minima. Applications: tangents to plane curves, related rates. The differential, use in finding approximations. Indefinite and definite integrals, areas and volumes.
NOTE: This course is available only to practising teachers.

MATH 404 ***Geometry for Teachers*** (6 credits)
Prerequisite: MATH 401 or equivalent. Certain fundamentals of Cartesian, vector and transformation geometry. Distance preceiving motions in the plane, affine transformations with applications in Euclidean geometry. Projective transformations and applications to conics. Applications of these methods to topics presented as informal geometry in grades 7-10.
NOTE:This course is available only to practising teachers.

MATH 405 ***Calculus II*** (3 credits)
Prerequisite: MATH 403. Differentiation and integration of trigonometric functions. Derivatives of inverse trigonometric functions, logarithmic functions, and exponential functions. Methods of integration by parts,

by substitution, by separation into partial fractions. Improper integrals, L'Hopital's Rule. Series: Convergence tests, Maclaurin and Taylor Theorems.
NOTE: This course is available only to practising teachers.

MATH 406 ***Algebra II*** (3 credits)
Prerequisite: MATH 401, or equivalent. Systems of equations, determinants, Cramer's rule. Matrices, operations on matrices, the inverse matrix. Gauss-Jordan method. Matrix transformations. Linear programming.
NOTE: This course is available only to practising teachers.

MATH 408 ***Geometry for Teachers*** (3 credits)
Prerequisite: MATH 401 or permission of the Department. Studies designed to meet more advanced mathematical and professional needs of students in the light of potential developments in the geometry curriculum at the junior secondary school level.
NOTE: This course is available only to practising teachers.

MATH 409 ***Computational Mathematics I*** (3 credits)
Prerequisite: Permission of the Department. Introduction to the microcomputer as a teaching and learning environment. Elements of programming. Editing and debugging. Flow charts and problem analysis. Applications to the teaching of arithmetic and algebra; simple data processing. Design of simple instructional sequences.
NOTE: This course is available only to practising teachers.

MATH 410 ***Curriculum Seminar*** (3 credits)
Prerequisite: Permission of the Department. Conducted in the form of a workshop. Examines arithmetic, algebraic, and geometric aspects of the mathematics curricula, grades 7—11. Critical examination of various textbooks and pedagogic approaches used in the schools.
NOTE: This course is available only to practising teachers.

MATH 411 ***Probability and Statistics for Teachers*** (3 credits)
Prerequisite: MATH 401. Elementary probability, permutations and combinations, binomial and normal distribution. Analysis and organization of statistical data. Tests of hypotheses. Confidence limits. Introduction into linear regression and correlations. Lectures and laboratory.
NOTE: This course is available only to practising teachers. Students who have received credit for MATH 407 may not take this course for credit.

MATH 417 ***Diagnosis and Remediation*** (3 credits)
Prerequisite: Permission of the Department. Diagnosis and remediation in the light of current research in psychology and the learning of Mathematics.
NOTE: This course is available only to practising teachers.

MATH 419 ***Computational Mathematics II*** (3 credits)
Prerequisite: MATH 409 or permission of the Department. More advanced programming. Use of the microcomputer for problem solving and simulation. Applications to the teaching of algebra and functions. Uses of the computer in the school environment. Individual programming projects.
NOTE: This course is available only to practising teachers.

31.300 Science and Human Affairs

Director
SUSAN SHEETS-PYENSON, *Associate Professor*

This programme is concerned with the social dimensions and interactions of science and technology. Its teaching and research provide an interdisciplinary examination of the ethical, cultural, political and environmental problems associated with scientific and technological change. Attention is also focused on analysis of the social systems of science from historical, sociological, economic and philosophical perspectives.

The programme is designed for students interested in science and technology, but who do not plan careers in scientific research or the technical professions. Rather it prepares them for constructive careers which involve a grasp of scientific methods, an understanding of scientific principles and an appreciation of the nature, content and implications of scientific research, technological innovation and industrial development. For students working toward degrees in science or engineering, the programme provides the opportunity to develop important additional perspectives and capabilities.

There are a number of streams or areas within the programme. In the History and Philosophy of Science, for example, students may concentrate so as to prepare themselves for graduate work. Another stream examines the social impact of science and technology by focusing on policy problems. Students may develop a variety of approaches for dealing with public policy in either the areas of science and technology or environment. These also are preparatory for existing graduate programmes.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
Students should consult with the Programme Coordinator prior to registering for Science and Human Affairs courses.

60 BA Specialization in Science and Human Affairs

12 SCHA 250^3, 251^3, 253^3, 254^3
3 Chosen from ECON 221^3; GEOL 325^3; MATH 207^3; PSYC 315^3 or SOCI 212^3, 213^3
9 Chosen from PHYS 210^6; BIOL 200^6, 201^3, or CHEM 205^3, 206^3 and 208^3, with not more than 6 credits in any single discipline
18 SCHA 353^3, 354^3, 355^3, 356^3, 453^6
12 Chosen from SCHA 260^3, 351^6, 452^6, or cognates from list below*
6 SCHA 454^6

42 BA Major in Science and Human Affairs

12 SCHA 250^3, 251^3, 253^3, 254^3
3 Chosen from ECON 221^3; GEOL 325^3; MATH 207^3; PSYC 315^3 or SOCI 212^3, 213^3
9 Chosen from PHYS 210^6; BIOL 200^6, 201^3, or CHEM 205^3, 206^3 and 208^3, with not more than 6 credits in any single discipline
12 Chosen from SCHA 260^3, 351^6, 353^3, 354^3, 355^3, 356^3, 452^6, 453^6, or cognates from list below*, with at least 6 SCHA credits
6 SCHA 454^6

30 Minor in Science and Human Affairs

12 SCHA 250^3, 251^3, 253^3, 254^3
18 Chosen from SCHA 260^3, 351^6, 353^3, 354^3, 355^3, 356^3, 452^6, 453^6, 454^6, or cognates from list below*, with at least 6 SCHA credits

**Cognates relating to the history, philosophy and sociology of science include: BIOL 320, 321; GEOG 391; GEOL 208; MATH 215, 216, 397; PHIL 328, 329, 421; PSYC 320; SOCI 406, 407; SCOL 251, 252, 253, 270.*

Those more broadly concerned with science and society include: BIOL 210; CHEM 304; POLI 363, 381; ANTH 325; THEO 452. Cognates treating environmental issues include: CHEM 302; ECON 391, 396; GEOG 211, 271, 317, 357.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

SCHA 250 ***Introduction to Science and Human Affairs I*** (3 credits)
The social and historical context of scientific and technological change. The reciprocal interactions of science with government, ideology, economic development, religion, literature and social theory; science and the city; science and the control of human life; science and human liberation; new definitions of scientific responsibility may be considered.
NOTE: Students who have received credit for INTE 250 may not take this course for credit.

SCHA 251 ***Introduction to Science and Human Affairs II*** (3 credits)
A continuation of SCHA 250. This course may be taken independently.
NOTE: Students who have received credit for INTE 251 may not take this course for credit.

SCHA 253 ***Environmental Issues I*** (3 credits)
The scientific, social and cultural nature of one's relationship to the environment. Emphasis is placed on pollution, conservation, population resources and human ecology.
NOTE: Students who have received credit for INTE 253 or URBS 253 may not take this course for credit.

SCHA 254 ***Environmental Issues II*** (3 credits)
A continuation of SCHA 253. This course may be taken independently.
NOTE: Students who have received credit for INTE 254 or URBS 254 may not take this course for credit.

SCHA 260 ***Science and Culture in the Western Tradition*** (3 credits)
Surveys the place of science in Western culture from the ancient Greeks until the present day. The aim of the course is to acquaint a nonspecialist audience with how a scientific worldview has profoundly shaped modern day society.

SCHA 298 ***Selected Topics in Science and Human Affairs*** (3 credits)

SCHA 299 ***Selected Topics in Science and Human Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCHA 351 ***Astronomy, Cosmology and the Space Age*** (6 credits)
The nature of the universe as interpreted by relevant scientific theories; cosmology and the shape, size and structure of the universe; possibility of intelligent life in the universe; social implications of space flight.
NOTE: Students who have received credit for INTE 351 may not take this course for credit.

SCHA 353 ***Science and Society I: From Ancient Times Until 1789*** (3 credits)
Prerequisite: SCHA 250; SCHA 251, or permission of Coordinator. This course surveys the history of science from the Ancient Greeks until the French Revolution, with an emphasis on the social history of science.

SCHA 354 ***Science and Society II: Since 1789*** (3 credits)
Prerequisite: SCHA 250; SCHA 251, or permission of Coordinator. This course surveys the history of science from the French Revolution until the present day, with an emphasis on the social history of science.

SCHA 355 ***Technology and Society I: From Ancient Times Until 1780*** (3 credits)
This course deals with the social role and impact of technology from the Ancient Greeks until the Industrial Revolution.

SCHA 356 ***Technology and Society II: Since 1780*** (3 credits)
This course deals with the role and impact of technology in Western Society from the Industrial Revolution until the present.

SCHA 398 ***Selected Topics in Science and Human Affairs*** (3 credits)

SCHA 399 ***Selected Topics in Science and Human Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCHA 452 ***Advanced Study in the History of Science*** (6 credits)
Prerequisite: Permission of the Coordinator. Seminar in a specific question in the History of Science. The emphasis is on encouraging students to conduct historical investigation on their own under a professor's guidance. The specific content varies from year to year depending on the instructor.
NOTE: Students who have received credit for SCHA 451 may take this course for credit provided that the subject matter is different.

SCHA 453 ***Science and Public Policy*** (6 credits)
Prerequisite: SCHA 250; SCHA 251 or permission of the Coordinator. This course deals with those public policy issues which involve a major component of science and technology, i.e., energy, environment, resources, health, etc. The course also covers the general relationships of science and government relating to the making of science and technology policy particularly emphasizing the Canadian context, but including such topics as technology aid and transfer.
NOTE: Students who have received credit for INTE 453 may not take this course for credit.

SCHA 454 ***Seminar in Science and Human Affairs*** (6 credits)
Prerequisite: Enrolment in Major or Specialization in Science and Human Affairs, or permission of the Coordinator. This seminar affords an opportunity for intensive examination of an explicitly interdisciplinary theme.
NOTE: With the permission of the Coordinator students may take this course twice for credit provided that

a different subject is dealt with the second time and will register under SCHA 455.
NOTE: Students who have received credit for INTE 454 may not take this course for credit.

SCHA 455 ***Seminar in Science and Human Affairs*** (6 credits)
Prerequisite: Permission of the Coordinator. Students who have received credit for SCHA 454 may register for SCHA 455 provided the subject matter is different.
NOTE: Students who have received credit for INTE 455 may not take this course for credit.

SCHA 498 ***Advanced Topics in Science and Human Affairs*** (3 credits)

SCHA 499 ***Advanced Topics in Science and Human Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.310 Sociology and Anthropology

Chair
PETER J. de VRIES, *Associate Professor of Anthropology*

Vice-Chair
WILLIAM C. REIMER, *Associate Professor of Sociology*

Sociology
Professors
SZYMON CHODAK
HUBERT GUINDON
JOHN D. JACKSON
KURT JONASSOHN
JOSEPH SMUCKER

Associate Professors
H. TAYLOR BUCKNER
GERALD DEWEY
JOHN P. DRYSDALE
EFIE GAVAKI
STEPHEN HLOPHE
E. SUSAN HOECKER-DRYSDALE
HERBERT HORWICH
KAZUO KUSANO
GUY LeCAVALIER
JOSEPH C. MOULEDOUX
BRIAN M. PETRIE
SUSAN RUSSELL
ANTHONY J. SYNNOTT
JOSEPH F. TASCONE
JULIO TRESIERRA

Assistant Professor
VERED AMIT TALAI

Canada Research Fellows
LINE GRENIER
HENRI LUSTIGER-THALER
FRAN SHAVER

Anthropology
Associate Professors
CHANTAL COLLARD
A. NORMAN KLEIN
DOMINIQUE LEGROS

Assistant Professor
DAVID HOWES

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.

Students who already had Honours status by June 1, 1977 will continue to be governed by the requirements that applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

60 BA Honours in Sociology
12 ANTH 202^{3}**; SOCI 203^{3}***, 212^{3}, 213^{3}
6 SOCI 300^{6}
18 SOCI 402^{3}, 403^{3}, 409^{6}, 410^{6}
24 Sociology elective credits* in consultation with the Departmental Honours Adviser.

**With prior approval of the Departmental Honours Adviser, the student may substitute up to 12 credits from a related discipline.*

***Students exempted from ANTH 202^{3} are required to take 3 credits from Anthropology 200- or 300-level courses.*

****Students exempted from SOCI 203^{3} are required to take 3 credits from Sociology 200- or 300-level courses.*

60 BA Specialization in Sociology
Stage I
3 ANTH 202^{3}
3 SOCI 203^{3}
6 Chosen from SOCI 212^{3}, 213^{3}, or 300^{6}
6 SOCI elective credits chosen in consultation with the Departmental Adviser (200 or 300 level recommended)
Stage II
6 Chosen from SOCI 212^{3}, 213^{3}, or 300^{6}
6 Chosen from SOCI 310^{6}, 311^{6}, 313^{3}, 314^{3}, 410^{6}
9 SOCI elective credits chosen in consultation with the Department Adviser (300 or 400 level recommended)
Stage III
6 Chosen from SOCI 320^{6}, 330^{6}, 370^{6}, 372^{6}
6 SOCI 402^{3}, 403^{3}
6 SOCI elective credits chosen in consultation with the Departmental Adviser (300 or 400 level recommended)
3 ANTH elective credits from 300-level courses chosen in consultation with the Departmental Adviser

**With prior approval of the Departmental Adviser, the student may substitute up to 6 credits from a related discipline.*

***Students exempted from ANTH 202^{3} are required to take 3 credits from Anthropology 200- or 300-level courses.*

****Students exempted from SOCI 203^{3} are required to take 3 credits from Sociology 200- or 300-level courses.*

60 BA Specialization in Anthropology and Sociology
See Anthropology

42 BA Major in Sociology
Stage I
3 ANTH 202^{3}
3 SOCI 203^{3}
6 SOCI elective credits chosen in consultation with the Departmental Adviser (~~200 or 300~~ level recommended)

Stage II

3 SOCI 212[3]

6 SOCI 300[6]

6 Chosen 310[6], 311[6], 313[3], 314[3], 410[6]

3 SOCI elective credits chosen in consultation with the Departmental Adviser (300 or 400 level recommended)

any level

Stage III

6 Chosen from SOCI 320[6], 330[6], 370[6], 372[6], 402[3], 403[3]

3 SOCI elective credits chosen in consultation with the Departmental Adviser (300 or 400 level recommended)

3 ANTH elective credits from 300-level courses chosen in consultation with the Departmental Major Adviser

any level

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*

***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*

30 Minor in Sociology

6 ANTH 202[3]*; SOCI 203[3]**

6 SOCI 300[6]

18 Sociology elective credits in consultation with Departmental Major Adviser. At least 9 of the 18 credits must be taken from courses numbered above the 200 level.

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*

***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*

NOTE: The course-numbering system in Sociology uses the first digit of the course number to indicate the number of prerequisites required for admission to a course. A 2—course has no prerequisites, a 3— has one, and a 4— has two prerequisites. The second digit indicates the place of a course among different subject groups. -1- courses constitute the research methods group, -0- courses the theory group. Thus, when a prerequisite is stated as "one 300-level course from Group 2", any course whose number is 32- (i.e., 320, 323, 324, 325) fulfills the prerequisite requirement.

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

SOCI 203 ***Introduction to Society*** (3 credits)
An introduction to the sociological study of society. The course begins with a consideration of the concepts, models, and methods used by sociologists. This is followed by an examination of selected substantive areas of social life, ranging from the relations between individuals and groups to total societies.
NOTE: Students who have received credit for SOCI 200 may not take this course for credit.

SOCI 212 ***Statistics I*** (3 credits)
Priority is given to enrol in this course to students who are in a Sociology or Anthropology programme. This course provides an introduction to the basic principles of statistics for social scientists. Topics include the concept of the level of measurement, standardization, the interpretation of graphs, measures of univariate distributions, cross classification, elementary measures of association, the logic of controls, and the basic principles of inferential statistics. The emphasis is on the implications of these statistical techniques for theoretical understanding of Sociology and Anthropology. *NOTE See §200.7*

SOCI 213 ***Statistics II*** (3 credits)
Prerequisite: SOCI 212. Priority is given to enrol in this course to students who are in Sociology or Anthropology programmes. Students are encouraged to take SOCI 212 immediately preceding SOCI 213. This course is designed to follow Statistics I. Topics include measures of association, the principles of probability and sampling distributions, hypothesis testing, and tests of significance. The emphasis is on the implications of these statistical techniques for theoretical understanding in Sociology and Anthropology. *NOTE See §200.7*

SOCI 220 ***Social Organization*** (3 credits)
Examines the basic characteristics of societal organization through the use of comparative and evolutionary perspectives. Conceptual analysis of specific forms of, and changes in, the comprehensive pattern of social organization.

SOCI 230 ***Race and Ethnic Relations*** (3 credits)
Race and ethnicity are examined as bases of social differentiation. Ethnic group relations are analyzed in relation to stratification and the exercise of power. Explorations of the phenomena of discrimination, prejudice, and intergroup accommodation.

SOCI 261 ***Social Problems*** (3 credits)
Consideration of a range of social problems from a sociological perspective. Examination of the process by which "social problems" are socially defined and recognized.

SOCI 262 ***Social Deviance*** (3 credits)
Attention is focussed on various forms of anti-social behaviour, particularly those that are socially-induced. This course examines the nature, forms, sources, functions and dysfunctions of deviations from social norms, and the mechanisms of social order and control. Deviance is viewed as a social process of

interaction and relationships that derive from the social structure and have consequences for it. Various forms of deviance are considered in terms of contemporary social theory and research.
NOTE: Students who have received credit for SOCI 260 may not take this course for credit.

SOCI 263 ***Juvenile Crime and Delinquency*** (3 credits)
This course examines the nature of juvenile crime and delinquency and their social causes and consequences. Juvenile crime and delinquency, as special kinds of deviance, receive the focus of attention, with emphasis on criminal-justice, juvenile-justice, criminal behaviour systems, and social policy on juvenile crime and delinquency.
NOTE: Students who have received credit for SOCI 260 may not take this course for credit.

SOCI 264 ***Sociology of Sport*** (3 credits)
This course provides a systematic analysis of the social influences upon sport in North America. Special attention is directed to the interrelationships between sport and various social institutions.

SOCI 270 ***Socialization*** (6 credits)
Examination of the social and cultural processes by which the individual becomes a functioning member of society. Attention given to adult socialization and re-socialization in diverse institutional contexts; e.g., schools, occupations, hospitals, prisons, the military. The relation of social structure to role acquisition and role performance is a major focus of the course.

SOCI 272 ***The Family*** (6 credits)
The family as an institution is examined in relation to social structure and historical change. Special emphasis is placed on trends in the nuclear family patterns of contemporary North American society, and on the relation of the family to the broader societal environment.

SOCI 274 ***The Sociology of Aging*** (6 credits)
This course examines the changes in society and in living conditions as populations and people age. The sources and the effects of these changes are looked at in the light of several substantive areas and in terms of their implications for social policy. While the major emphasis is on the Canadian experience, some comparative materials are used to widen the perspective.

SOCI 280 ***Québec Society*** (6 credits)
Focus upon the historic changes in Québec society, with emphasis upon the period following the Second World War. Examination of issues which have provoked conflicting interpretations, including the Conquest, the nature of Confederation, Québec nationalism, and the language question.

SOCI 282 ***Canadian Society*** (6 credits)
Analysis of Canadian social structure and change; the relation of the whole of Canadian society to its constituent elements; the relation of Canadian society to its international environment.

SOCI 298 ***Selected Topics in Sociology*** (3 credits)

SOCI 299 ***Selected Topics in Sociology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SOCI 300 ***Classical Social Theory*** (6 credits)
Prerequisite: SOCI 203. Examination of the origins of Sociology and of the sociological works of nineteenth- and early twentieth-century European theorists, with consideration of the social and political context. Particular emphasis is given to the works of Durkheim, Marx, and Weber. Readings include primary sources and critical commentaries.

SOCI 310 ***Research Methods*** (6 credits)
Prerequisite: SOCI 203; SOCI 212. Introduction to qualitative and quantitative methods of research in Sociology.

SOCI 311 ***Survey Research Methods*** (6 credits)
Prerequisite: SOCI 203; SOCI 212. Examination of methods of conducting survey research. Topics include design, sampling, pretesting of instruments, data collection, logic of analysis, multivariate analysis, and report writing.

SOCI 313 ***Field Work Research: Observation*** (3 credits)
Prerequisite: SOCI 203. The collection of primary data by observational methods in natural settings is studied and practiced on field trips.
NOTE: Students who have received credit for SOCI 312 may not take this course for credit.

SOCI 314 ***Field Work Research: Interviewing*** (3 credits)
Prerequisite: SOCI 203. A variety of types of interviewing is studied and practiced on field assignments.
NOTE: Students who have received credit for SOCI 312 may not take this course for credit.

SOCI 320 ***Comparative Social Systems*** (6 credits)
Prerequisite: SOCI 203 or SOCI 220. Examination of the problems of development, modernization, and social change in terms of a general theoretical framework. Comparative analysis of trends of development in the West, the Soviet Union and Eastern Europe, and the Third-World nations.

SOCI 323 ***Economy and Society*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220. Examination of the ways in which economic activities are legitimated or otherwise affected by social norms and values, and of the ways in which various social systems react to the strains created by the accommodation of new technology and of new industrial organizations.

SOCI 324 ***Sociology of Economic Development*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220. Consideration of theories and models of economic development. Attention given to the role of foreign-aid programmes, the role of local political élites and self-reliance as factors in economic development.

SOCI 325 ***Social Change*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220. Examination of the sources, mechanisms, and consequences of social and cultural change; analysis of classical and contemporary theories of change, as well as important empirical studies.

SOCI 327 ***Social Issues: Equity*** (3 credits)
Prerequisite: SOCI 203; ANTH 202 or POLI 200. Analysis of selected social issues and public policies as related to poverty, unemployment, ethnic, race and religious discrimination, urban and rural decline. Attention is paid to the changing role of the state in connection with its involvement in solving these problems.
NOTE: Students who have received credit for SOCI 326 may not take this course for credit.

SOCI 328 ***Social Issues: Liberties*** (3 credits)
Prerequisite: SOCI 203; ANTH 202 or POLI 200. Analysis of selected social issues and public policies as related to rights, entitlements, role of the mass media, family and generational problems, bureaucracy. Attention is focussed on the expansion of state functions in connection with implementation of policies related to these issues.
NOTE: Students who have received credit for SOCI 326 may not take this course for credit.

SOCI 329 ***Theories and Structures of Formal Organizations*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220. Examination of the nature and characteristics of formal organizations, their internal structures, interrelationships and problems.
NOTE: Students who have received credit for SOCI 340 may not take this course for credit.

SOCI 330 ***Social Class and Structured Inequality*** (6 credits)
Prerequisite: SOCI 203 or SOCI 220 or SOCI 230. The dynamics of social stratification and differentiation, including economic distinctions and their consequences, social status, power, and mobility. Emphasis upon Canadian society.

SOCI 333 ***Political Sociology*** (3 credits)
Prerequisite: SOCI 203 or 30 credits. This course is concerned with power in social systems; its nature, organization, distribution, determinants, and consequences. The focus of the course is on the ways in which power is exercised in social systems: social groups, movements and large scale organizations.

SOCI 336 ***Collective Behaviour*** (3 credits)
Prerequisite: SOCI 203. The nature, emergence and dynamics of short-term collective behaviour. There is an examination of classical and contemporary interpretations of collective behaviour with emphasis on current issues such as the irrationality or rationality of the participants' behaviour. The course focuses on Canadian and American events such as riots and the emergence of violence in demonstrations related to current social problems and issues.

SOCI 337 ***Social Movements*** (3 credits)
Prerequisite: SOCI 203. The nature, emergence and dynamics of organized collective behaviour and social movements are examined in light of classical and contemporary theories. The course focuses on the impact of leadership, organizational resources and discontent with institutionalized social relations on movements. Contemporary social movements in Québec, the rest of Canada and the U.S. serve as illustrations.

SOCI 338 ***Sociology of Religion*** (3 credits)
Prerequisite: SOCI 203; SOCI 339 or RELI 213. Study of the place of religion in sociological conceptions of social reality. Consideration of the writings of Marx, Durkheim, Weber, Simmel, Troeltsch, Comte, Niebuhr, Parsons, Bellah, and Berger. Attention also given to appropriate work in allied approaches (e.g., Malinowski and Freud) to the understanding of various dimensions of religion in social context.

SOCI 339 ***Religion and Society*** (3 credits)
Prerequisite: SOCI 203 or RELI 213. Analysis of the relationship between religions and other social institutions in contemporary industrial society with particular emphasis given to the impact of secularization on the sociological dimensions of religious thought and conduct in various social-religious communities.

SOCI 343 ***Sociology of Work*** (6 credits)
Prerequisite: SOCI 203 or SOCI 220. Examination of the structural characteristics of work in modern industrial society. Consideration of the spectrum of occupations and professions; the relationships between work and identity in contemporary society. Special attention placed on the issues of conflict and alienation in work and the impact of work on other aspects of social structure.

SOCI 344 ***Sociology of Leisure*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220. The effects of social, economic, and political institutions upon the structure and use of leisure time. Emphasis upon historical changes and the implications of alienation, anomy, and inequality.

SOCI 345 ***Sociology of Labour Movements*** (3 credits)
Prerequisite: SOCI 203. Origins and development of labour movements; contemporary characteristics of union organizations within the context of their social, political, and economic environments. Emphasis upon Canada and Québec.

SOCI 346 ***Industrialization*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or permission of the Department. A study of the processes of industrialization. Analyses are directed primarily toward the Canadian experience and include a consideration of theories regarding industrialization in Canada; an examination of the social and economic impact of large-scale enterprises; the changing role of governments; the ongoing interaction between social organization and advanced technology; and contemporary thought on the social consequences of economic crises.
NOTE: Students who have received credit for SOCI 342 may not take this course for credit.

SOCI 347 ***Sociology of Labour-Management Relations*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or permission of the Department. A study of the shifting patterns in labour-management relations with a special focus on Canada. The course includes analyses of theories of management; the impact of the labour union movement, changes in the nature of the labour market; the significance of the growth of the service sector; the changing role of governments in labour-related issues; and contemporary thought on new forms of industrial organization.
NOTE: Students who have received credit for SOCI 342 may not take this course for credit.

SOCI 350 ***Sociology of Urban Regions I*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or SOCI 230. Analysis of the historical development of the city, focusing on the pre-industrial city from a cross-cultural perspective.

SOCI 351 ***Sociology of Urban Regions II*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or SOCI 230. Analysis of the growth of urbanization in North America, concentrating on the social and spatial organization of Canadian cities, especially Montréal.

SOCI 353 ***Community Studies I*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or SOCI 230. The study of locale. The major theoretical approaches used in the study of locale are examined in terms of their content and methodological implications. Special attention is given to the social system and structuralist approaches.

SOCI 354 ***Community Studies II*** (3 credits)
Prerequisite: SOCI 203 or SOCI 220 or SOCI 230. Analysis of selected studies of Canadian communities in terms of one or more theoretical approaches current in the field. Some course materials are available only in French.

SOCI 357 ***Population and Society*** (3 credits)
Prerequisite: SOCI 203. A critical analysis of population dynamics, including an examination of theories concerning the population-resources problem (e.g. Malthus and Marx). Emphasis is given to the relation between ideology and methodology in population study.

SOCI 358 ***Social Demography*** (3 credits)
Prerequisite: SOCI 212. Basic principles, issues, data, and methods of population study. Primary focus on social factors that affect demographic processes, and the ways in which demographic change is related to social structure and social change. Consideration of the basic components of demographic analysis: fertility, mortality, and migration.

SOCI 361 ***Criminology*** (3 credits)
Prerequisite: SOCI 203. The major objectives of this course are to come to an understanding of the emergence of European and North American criminology and an understanding of the contemporary perspectives explaining crime, criminal behaviour, and its control.
NOTE: Students who have received credit for SOCI 360 may not take this course for credit.

SOCI 362 ***Crime and Justice*** (3 credits)
Prerequisite: SOCI 203. The major objectives of this course are to come to an understanding of the issues and perspectives related to the problems of apprehending, processing, and punishing the criminal. Thus the process by which the criminal is legally judged to be guilty, the problem of sentencing, the problem of corrections, and the victim are some of the important issues.
NOTE: Students who have received credit for SOCI 360 may not take this course for credit.

SOCI 368 ***(also given as HIST 368) The History and Sociology of Genocide*** (6 credits)
Through the comparative and historical examination of a number of cases, this course investigates the meaning of genocide and the processes that have led to it.

SOCI 370 ***Self and Society*** (6 credits)
Prerequisite: SOCI 203. Study of the basic concepts and theories regarding social definitions of the self. Emphasis on ideas regarding personality, motivation, and interpersonal attitudes, viewed in terms of the interplay between actors and social structures.

SOCI 372 ***Sociology of Sex Roles*** (6 credits)
Prerequisite: SOCI 203. Examination of the social status and roles of men and women in society. Use is made of comparative, historical, and empirical research. Particular attention is paid to the Marxist, feminist, and socialist-feminist theoretical perspectives on the patriarchal nature of society.

SOCI 373 ***Sociology of Childhood*** (3 credits)
Prerequisite: SOCI 203. Comparative and historical approach to the study of the status and role of the child in the family and in the larger society. Emphasis on the sociological aspect of childhood in modern industrial societies.

SOCI 374 ***Symbols, Rituals and The Body*** (3 credits)
Prerequisite: SOCI 203; ANTH 202. The study of the social roles of the body. Topics include body image and self-esteem, the symbolism of beauty and ugliness, height, hair, dress, the face, body-language, health and fitness, eating and drinking patterns. The course is considered in anthropological and sociological perspectives.

SOCI 377 ***Sociology of Education*** (3 credits)
Prerequisite:SOCI 203. Analysis of the social structures within a formal education system. Trends in education are examined in relation to broader patterns of social change.

SOCI 380 ***Social Movements in Québec*** (6 credits)
Prerequisite: SOCI 203 or SOCI 280. Analysis of historically significant movements for social change in Québec.

SOCI 382 ***Intergroup Relations in Canada*** (3 credits)
Prerequisite: SOCI 203 or SOCI 230 or SOCI 282. Canadian ethnic group phenomena are examined in the light of theories of intergroup relations. The groups include Indians, Inuit, Blacks, Jews, and English- and French-speakers. The mosaic theory of Canadian ethnic relation is considered.

SOCI 398 ***Selected Topics in Sociology*** (3 credits)

SOCI 399 ***Selected Topics in Sociology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SOCI 401 ***The History of Social Thought*** (6 credits)
Prerequisite: SOCI 300. Overview of the various ideas and schools of thought which attempt to explain the organization, development, and change of various aspects of human societies. Emphasis on the philosophical underpinnings of the discipline of Sociology. The time span ranges from ancient Greek social thought to early nineteenth-century European thought in which Sociology was founded.

SOCI 402 ***Contemporary Sociological Theory I*** (3 credits)
Prerequisite: SOCI 300. Critical examination of contemporary sociological theories against the background provided by Marx, Durkheim, and Weber. The theories are analyzed in terms of their assumptions, conceptual distinctions, methodological features and ethical implications. Theoretical approaches are chosen to represent a range of approaches to sociology, such as neo-positivism, functionalism, conflict theory and structuralism.
NOTE: Students who have received credit for SOCI 400 may not take this course for credit.

SOCI 403 ***Contemporary Sociological Theory II*** (3 credits)
Prerequisite: SOCI 300. Critical examination of contemporary sociological theories against the background provided by Marx, Durkheim, and Weber. The theories are analyzed in terms of their assumptions, conceptual distinctions, methodological features and ethical implications. Theoretical approaches are chosen to represent a range of approaches to sociology, such as symbolic interactionism, social phenomenology, and critical theory.
NOTE: Students who have received credit for SOCI 400 may not take this course for credit.

SOCI 404 ***Sociology of Literature*** (3 credits)
Prerequisite: SOCI 203; ANTH 202; or a minimum of 6 credits in English Literature, Communication Studies or Political Science. A critical study of literature and para-literature as a cultural and social practice. Various approaches to the sociology of literature are examined. The emphasis is on that approach which deals with social genesis of literature and literature as a social product of a social force. Selected Canadian fiction and drama are analyzed.

SOCI 406 ***Sociology of Knowledge*** (3 credits)
Prerequisite: SOCI 300. Examination of a variety of theories of the relation of knowledge, belief, and meaning to the social context.
NOTE: Students who have received credit for SOCI 405 may not take this course for credit.

SOCI 407 ***Sociology of Science*** (3 credits)
Prerequisite: SOCI 300. Study of the social context of science; the impact of societal factors upon science; the production of scientific knowledge viewed as a social process; the social uses and consequences of science. Consideration of the relation of the sociology of science to the other social studies of science.
NOTE: Students who have received credit for SOCI 405 may not take this course for credit.

SOCI 409 ***Honours Seminar*** (6 credits)
Prerequisite: SOCI 410 and permission of the Honours Adviser. Consideration of methodological and theoretical ideas related to the formulation of an Honours research proposal. Second-term work involves completion of research and writing of an Honours paper.

SOCI 410 ***Research Design and Analysis*** (6 credits)
Prerequisite: SOCI 203; SOCI 212; SOCI 213. Study of quantitative methods of data collection and analysis. Topics include: experimental and quasi-experimental design, principles of measurement, survey design, secondary data sources, techniques of multivariate analysis, and interpretation.

SOCI 411 ***Logic of Sociological Inquiry*** (3 credits)
Prerequisite: SOCI 203 and 6 credits of courses from Group 1. Consideration of the interaction between sociological theory and empirical research. Critical study of the conceptual bases for truth-claims within the major sociological perspectives.

SOCI 429 ***Dynamics of Formal Organizations*** (3 credits)
Prerequisite: SOCI 329 or 6 Sociology credits at the 300 level. Analysis of the major social dynamics at work in formal organizations and examination of the impact of external societal factors on organizations.
NOTE: Students who have received credit for SOCI 340 may not take this course for credit.

SOCI 450 ***Seminar in Urban and Metropolitan Studies*** (6 credits)
Prerequisite: SOCI 203 and one course from Group 5. Intensive study of selected theories and monographs dealing with aspects of urbanization.

SOCI 460 ***Law and Society*** (6 credits)
Prerequisite: SOCI 203; SOCI 262 or SOCI 263, or SOCI 361, SOCI 362. Study of the legal system as an institutionalized system of social control, using historical and comparative data. Special attention is given to the study of law and legal organizations in contemporary society in relation to other areas of sociological inquiry, especially social change, conflict, and decision-making.

SOCI 498 ***Advanced Topics in Sociology*** (3 credits)

SOCI 499 ***Advanced Topics in Sociology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ANTHROPOLOGY

60 BA Honours in Anthropology
6 ANTH 202[3]*; SOCI 203[3]**
6 LING 200[6]
24 Chosen from ANTH 200-level courses (except ANTH 202[3]) and ANTH 300-level courses (ANTH 310 recommended)
18 Chosen from ANTH 400-level courses
6 ANTH 495[6]

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*
***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*

42 BA Major in Anthropology
6 ANTH 202[3]*; SOCI 203[3]**
15 Chosen from ANTH 200-level (except ANTH 202[3]) and ANTH 300-level courses (ANTH 310 recommended)
18 Chosen from ANTH 400-level courses
3 SOCI elective credits in consultation with the Departmental Major Adviser

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*
***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*

60 BA Specialization in Anthropology
6 ANTH 202[3]*; SOCI 203[3]**
6 LING 200[6] or SOCI 212[3], 213[3]
24 Chosen from ANTH 200-level courses (except ANTH 202) and ANTH 300-level courses***
18 Chosen from ANTH courses at the 400-level
6 Chosen from ANTH courses at the 300- or 400-level

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*
***Students exempted from SOCI 203[3] are*

required to take 3 credits from Sociology 200- or 300-level courses.
****ANTH 310 recommended.*

60 BA Specialization in Anthropology and Sociology

12 ANTH 202[3]*; SOCI 203[3]**, 212[3], 213[3]***
12 Chosen from ANTH 200-level courses (except ANTH 202) and ANTH 300-level courses
6 Chosen from SOCI 310[6], 311[6], 313[3], 314[3], 410[6]
6 Chosen from SOCI 320[6], 330[6], 351[3], 354[3], 357[3], 358[3], 372[6], 402[3], 403[3]
6 Chosen from SOCI courses at the 400 level
6 Chosen from ANTH 310[6]; SOCI 300[6]
12 Chosen from ANTH 400-level courses

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- and 300-level courses.*
***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*
****To be taken immediately after 212[3].*

30 Minor in Anthropology

6 ANTH 202[3]*; SOCI 203[3]**
18 Chosen from ANTH 200-level (except ANTH 202[3]) and ANTH 300-level courses
6 Chosen from ANTH 400-level courses

**Students exempted from ANTH 202[3] are required to take 3 credits from Anthropology 200- or 300-level courses.*
***Students exempted from SOCI 203[3] are required to take 3 credits from Sociology 200- or 300-level courses.*

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent course.

ANTH 202 ***Introduction to Culture*** (3 credits)
An introduction to the anthropological study of culture. The course begins with a consideration of the concepts, models, and methods used by anthropologists. This is followed by an examination of the many ways in which peoples of the world, past and present, have organized the activities, institutions, and belief systems that sustain social life. The course concludes with a discussion of the relevance of Cultural Anthropology to contemporary issues.
NOTE: Students who have received credit for ANTH 211 may not take this course for credit.

ANTH 203 ***Culture and Biology: An Anthropological Perspective*** (3 credits)
This course focuses on the interrelationship between culture and human biology. The first part of the course examines current debates about human origins, human variation, and the influence of cultural adaptation on human biology. This is followed by a critical examination of the strategies of sociobiology for the study of socio-cultural phenomena.

ANTH 298 ***Selected Topics in Anthropology*** (3 credits)

ANTH 299 ***Selected Topics in Anthropology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ANTH 302 ***Art, Aesthetics, and Anthropology*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. An introduction to the social uses of paintings, sculptures, masks, body tattoos or paintings, and costume decorations in native societies of North and South America, Africa, and Pacific, etc. The first part of the course deals with how traditional "primitive art forms" are structured through the study of selected examples. The second part offers an analysis of the functions of art objects and art forms in archaic societies. The third and last part is devoted to a discussion of where "primitive" artists find the source of the particular aesthetic form they resort to in their work.

ANTH 303 ***Aboriginal Indian and Inuit Socio-Political Organizations*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. A study of the various forms of socio-political organization achieved by the Indian and Inuit peoples of North America before the colonization of their continent by Europe. The course gives a sense of what social life was in these societies, and provides a background which helps to better understand the contemporary conflicts between present-day native people and the Canadian and American governments.
NOTE: Students who have received credit for ANTH 363 may not take this course for credit.

ANTH 304 ***Native People Today*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. First, a review of the aboriginal cultures of native Americans followed by an outline of the history of the Native-White relations, and of the legal status granted to the first people of Canada and the U.S.A. by the various past and present governments. Second, an examination of the demographic and social characteristics of today's native people, including the Metis, as well as of the Indian-Inuit Affairs programmes and government policies. Third, a discussion of present-day native organizations, native claims, and of the prospects for improvements.
NOTE: Students who have received credit for ANTH 362 may not take this course for credit.

ANTH 305 ***Culture and History*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. This course presents different ways in which history has been understood in our own culture as well as in other non-western cultures. The course includes questions about history as legitimating charters, as repeating cycles, as a scientific inquiry, as a series of unique events and as a basis for ethical judgements.

ANTH 306 ***Culture and Language*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. An introduction to major issues in language as they relate directly to problems in anthropology, and indirectly in sociology, philosophy, and psychology. We survey different approaches to the interrelation of language, thought, and culture.

ANTH 307 ***Understanding Myths*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. Competing interpretations of some classic myths such as the Oedipus, the Abraham and Isaac, or the Job stories are studied and discussed. The interpretations of these classic myths in Western culture is followed by an examination of Claude Lévi-Strauss' structuralist interpretation of a non-Western myth. The course concludes with an examination of mythmaking in our own contemporary culture, by reviewing stories such as that surrounding Kennedy's death.

ANTH 308 ***Femaleness, Maleness and Otherness in Cross-Cultural Perspective*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. The first part of the course is devoted to cultural variations regarding sex and gender: What is female? What is male? Is there a third gender? Its second part is an introduction to theories regarding equality, autonomy, denomination, complementarity or exploitation between the genders. Its third part deals with various indigenous theories concerning the body, its working, sex and reproduction, pollution, as well as female, male (and other) codes of "Honour".

ANTH 309 ***Matrilineal Kinship*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. An introduction to the literature on matrilineal societies. The readings, class discussions, and written exercises focus on a critical review of current positions on matriliny. Questions are raised about how anthropologists have interpreted matrilineal kinship, about how its distinction from patrilineal and bilateral systems has been dealt with, and about the roles and power of the sexes in matrilineal settings.

ANTH 310 ***The Making and Unmaking of Anthropological Theories*** (6 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. Priority is given to enrol in this course to students who are in Anthropology and Sociology programmes. This course provides the student with a broad critical perspective on various theoretical approaches to anthropology (evolutionism, functionalism, structuralism, cultural materialism, and marxism). Anthropology is always balancing between field-work and theories. This course shows how field-work has shaped and continues to shape the making and the unmaking of theories.

ANTH 321 ***The Stateless Societies of Africa*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. The course surveys stateless societies spread across the Sudan into Nigeria. The course outlines hominid evolution in Eastern and Southern Africa and sketches the outlines of African prehistory as reconstructed by archaeologists. These are followed by an investigation of such present-day hunters and gatherers as the Kalahari Bushmen and the Ituri forest Pygmies. The bulk of the course studies a number of stateless societies in the area, such as the pastoral Nuer and the agricultural Tiv. Particular emphasis is given to the ways in which kinship and marriage organize social, political, and economic relations and preserve social order in these cultures without institutionalized chieftainship.

ANTH 322 ***Pre-Colonial Kingdoms of Africa*** (3 credits)
Prerequisite: ANTH 202 or equivalent, or permission of the Department. An extensive review of African states from the Nubian dynasties of Egypt and the Nile region to the Sudanic and Forest Kingdoms of the pre-mercantilist period. Their political, economic and social structures are examined from the viewpoint of their contrasts and vulnerability to colonialism, with the aim of providing an explanation for the rise of nationalism in the post-colonial states of Africa.

ANTH 325 ***Magic, Science, Religion, and Ideology*** (3 credits)
Prerequisite: ANTH 202, or RELI 211, or RELI 213, or permission of the Department. An introduction to the field of belief systems and of their attendant rituals and practices. The first part of the course is devoted to the problem of how anthropologists differentiate between magic, science, religion, and ideology. The second part deals with specific aspects of magic, of religion, of ideology, and of science. The third part discusses the issue of whether social belief systems institute the social reality in which the believers live, or whether they mask the true social relations that they entertain with each other.

ANTH 370 ***Anthropology and Contemporary Issues*** (3 credits)
Prerequisite: ANTH 202 or permission of the Department. This course examines contemporary world issues from an anthropological, i.e. cross-cultural, perspective. Our discussions range from a critical examination of anthropological concepts and methods to a consideration of the uses of anthropology in practical applications. Specific issues dealt with include the consequences of underdevelopment, modernization, and the place of folk cultures and tradition in contemporary societies.

ANTH 371 ***Peasant Societies and Cultures*** (3 credits)
Prerequisite: ANTH 202 or permission of the Department. This course examines agrarian societies in different cultural and political contexts. The course begins with a brief discussion of the archaeological evidence for early and later Neolithic agriculturalists. This is followed by an examination of peasantries, their persistence and transformation. The course concludes with a discussion of the role that subsistence producers play in contemporary societies.

ANTH 398 ***Selected Topics in Anthropology*** (3 credits)

ANTH 399 ***Selected Topics in Anthropology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

ANTH 401 ***Neo-Marxism and Archaic Societies*** (3 credits)
Prerequisite: Twelve credits in 300-level Anthropology, or permission of the Department. An exploration of the neo-marxist literature on archaic societies. The first part of the course offers a systematic introduction to the basic concepts of historical materialism. The second part is devoted to selected case-studies: societies from ancient Africa, America, etc. are analyzed in the neo-marxist perspective. The course concludes with an appraisal of economic life in non-industrial societies.

ANTH 402 ***Neo-Marxist Anthropology and Culture*** (3 credits)
Prerequisite: Twelve credits in 300-level Anthropology, or permission of the Department. This course is a critique of classical cultural anthropology for its concession to a theoretical framework which cannot grasp the logic of cultural reproduction. It proposes a thesis which emphasizes the importance of a communicative and critical sense of rationality for understanding the centrality of culture in the reproduction of social life.

ANTH 410 ***Theories of Culture*** (6 credits)
Prerequisite: ANTH 202 and twelve credits in 200- and 300-level Anthropology, or permission of the Department. Term I: Classical Psychoanalysis and Marxism. The first term develops an analysis of Freud's and Marx's positions on culture. Term II: Hermeneutics and structuralism. The second term focuses on Max Weber's overall approach to culture, the implicitly hermeneutic anthropology of Ruth Benedict and members of the "American School" led by Franz Boas, and Claude Lévi-Strauss' Structuralism.

ANTH 426 ***Symbolic Anthropology*** (6 credits)
Prerequisite: Twelve credits in 300-level Anthropology, or permission of the Department. An exploration into interpretive anthropology by examining ways of seeing, knowing, believing, and feeling in our own culture. Since interpretive anthropology is at the crossroad of several disciplines, the course discusses the work not only of cultural anthropologists, but also of linguists, art and literary critics, as well as philosophers. Authors studied include among others, Lévi-Strauss, Sapir, Chomsky, Orwell, John Berger, Wittgenstein, Marx and Engels.

ANTH 459 ***Political Anthropology*** (6 credits)
Prerequisite: Twelve credits in 300-level Anthropology, or permission of the Department. An examination of political process and political organization in cross-cultural perspective. Part I considers the differing approaches to political organization and processes, leadership, power, and authority in non-western cultures of various degrees of complexity. Part II analyzes social conflict in relation to politics, social continuity, and social change.

ANTH 460 ***Kinship and Social Anthropology*** (6 credits)
Prerequisite: Twelve credits in 300-level Anthropology, or permission of the Department. The first part of the course deals with residence, descent, generation and elderness, with special consideration given to the functionalist and Marxist approaches to the study of lineage societies. Its second part is devoted to the prohibition of incest, sex and marriage, terminology, kinship attitudes, and symbolic kinship with special attention given to the structuralist alliance theory.

ANTH 495 ***Honours Essay*** (6 credits)
Prerequisite: Honours in Anthropology. Under the supervision of an Anthropology staff member, the student prepares an Honours essay on a subject chosen in consultation with, and approved by, the professor.

ANTH 498 ***Advanced Topics in Anthropology*** (3 credits)

ANTH 499 ***Advanced Topics in Anthropology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.320 Teaching of English as a Second Language

Acting Director
BRUCE BARKMAN, *Associate Professor*

Professors
NANCY BELMORE
PATSY M. LIGHTBOWN
JOHN UPSHUR

Associate Professors
PALMER ACHESON
RONALD MACKAY
GWENDOLYN S. NEWSHAM
JOE DARWIN PALMER
BRIAN M. SMITH

Assistant Professor
V. ALEX SHARMA

Adjunct Professor
ARLENE STAIRS

Lecturers
JOAN OAKLEY
JOANNA L. WHITE
JOHN WILKINSON

*BACHELOR OF EDUCATION (Teaching English as a Second Language)

The Centre for the Teaching of English as a Second Language offers the Degree of Bachelor of Education (Teaching English as a Second Language).

Admission Requirements (BEd)
General admission requirements are listed in §13 (Admission Regulations). Specific requirements are as follows:
1. Satisfactory completion of a two-year pre-university programme in a CEGEP or equivalent. Within the programme, the students will be required to have successfully completed the equivalent of four semester courses in English.
2. Owing to the specialized nature of this programme, no more than 30 pro tanto credits will normally be permitted, and the University reserves the right to determine which ones these should be.
3. Candidates must demonstrate competence in English. All non-native speakers of English must take a formal test of English proficiency and obtain a score acceptable to the TESL Centre.
NOTE I: Arrangements for taking the proficiency test may be made through the Admissions Office.
4. The BEd(TESL) is open to both prospective and experienced teachers. The BEd(TESL) is offered in the day and evening, and in the summer session. The internship package of courses (TESL 324^3, 385^3, 411^3, 424^3 and 485^6) is offered *only* as daytime, Fall-winter courses. Some of the courses may also be offered outside Montréal through the Office for Off-Campus Education.

78 BEd Specialization in Teaching English as a Second Language

33 TESL 221^3, 231^3, 232^3, 324^3, 341^3, 385^3, 413^3, 415^3, 424^3, 485^6

15 Chosen from TESL 201^3, 205^3, 211^3, 298^3, 299^6, 318^3, 351^3, 361^3, 398^3, 399^6, 433^3, 434^3, 442^3, 491^3, 492^3, 498^3, 499^6, approved* linguistics-related courses in LING, MODL, FRAN, EDUC, etc.
NOTE: At least 9 credits must be in TESL

6 EDUC 210^6

12 Chosen from courses in EDUC, PSYC, ADED.
NOTE: Students who intend to apply for teacher certification in Québec must include EDUC 445^3 and 414^3 or PSYC 281^3.

6 ENGL 212^3 and 213^3 or 396^6

6 English literature, to be approved by TESL Centre

**NOTE: Written approval of the TESL programme adviser is required.*

CERTIFICATE IN THE TEACHING OF ENGLISH AS A SECOND LANGUAGE: SEQUENCE I

This 30-credit programme is offered to experienced teachers who are not native speakers of English.

Admission Requirements
1. Candidates must have an appropriate teacher's certificate or the equivalent of one year's experience as a full-time second-language teacher (400 hours).
2. Candidates must take a formal test of English proficiency and obtain a score acceptable to the TESL Centre. NOTE: Arrangements for taking the proficiency test may be made through the Admissions Office.

Concordia students may transfer into the Certificate programme all applicable Concordia credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. Students from other institutions may transfer up to *twelve* applicable credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The

credits that may be so transferred are determined by the University at the point of entry into the programme.

The TESL Certificate: Sequence I programme is offered in the evening and in the summer session, and may be offered outside Montréal through the Office for Off-Campus Education.

NOTE II: Individuals who have completed TESL Certificate: Sequence II are not eligible for admission to TESL Certificate: Sequence I.

30 Certificate in the Teaching of English as a Second Language: Sequence I
Courses
TESL 201[3], 203[6], 205[3], 324[3], 341[3], 413[3], 415[3], 424[3], 433[3]

CERTIFICATE IN THE TEACHING OF ENGLISH AS A SECOND LANGUAGE: SEQUENCE II

This 30-credit programme is offered to experienced teachers whose native language is English or whose proficiency in English meets native-user standards.

Admission Requirements
1. Candidates must have an appropriate teacher's certificate or the equivalent of one year's experience as a full-time second-language teacher (400 hours).
2. Candidates must demonstrate competence in English. All non-native speakers of English must take a formal test of English proficiency and obtain a score acceptable to the TESL Centre. NOTE: Arrangements for taking the proficiency test may be made through the Admissions Office.

Concordia students may transfer into the Certificate programme all applicable Concordia credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. Students from other institutions may transfer up to *twelve* applicable credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

The Certificate: Sequence II programme is offered in the day and evening, and in the summer session. Some of the courses may also be offered outside Montréal through the Office for Off-Campus Education.

NOTE III: Individuals who have completed TESL Certificate I are not eligible for admission to TESL Certificate II.

30 Certificate in the Teaching of English as a Second Language: Sequence II
6 ENGL 212[3] and 213[3] or 396[6]
24 TESL 221[3], 231[3], 232[3], 324[3], 341[3], 415[3], 424[3], 433[3]

INFORMATION RELEVANT TO ALL PROGRAMMES

NOTE IV: Upon successful completion of the BEd (TESL) programme, and after application to the Coordinator of Graduation (Evaluation) in the Registrar's Services Office, a graduate may be recommended to the Québec Teachers Certification Service for a "Permis d'enseigner (probation): autorisation personnelle temporaire". This temporary *teaching permit* will be issued by the Québec Ministère de l'Éducation to teach ESL at the primary and secondary levels in French-speaking schools. The graduate then has five years to complete the two-year full-time probationary teaching period. When this has been done, the graduate will be eligible for a "Brevet d'enseignement: autorisation personnelle permanente" (a *teaching diploma*).

Upon successful completion of the TESL Certificate Sequence I or TESL Certificate Sequence II, a graduate previously certified to teach in Québec will be recommended for an additional "Brevet d'enseignement: autorisation personnelle permanente". This *teaching diploma* will be issued to teach ESL at the primary and secondary levels in French-speaking schools. A graduate who has been granted a temporary *teaching permit* to teach a subject other than ESL may be recommended for an additional permit to teach ESL.

There is no comparable certification process for teaching ESL at CEGEP level — Collège d'enseignement général et professionnel (junior college) or other adult level.

To be recommended for certification (Permit or Diploma), students must achieve at least a C grade in methodology and teaching practice courses: that is,
1. for the BEd, in TESL 324, 424, 385, and 485;
2. for the Certificate Sequence I or II options, in TESL 324, 424, and 433.

Students who obtain a passing grade that is below the level required for recommendation for certification will be placed on conditional standing within the programme and will be so informed in writing by the Director of the TESL Centre. Students will be allowed to repeat the course(s) in question only once in order to achieve the required grade. (For the status of this grade as part of the student record, see calendar §16.3.8.)

Students who fail to repeat the course successfully within one year will, to remain in the programme, be required to acknowledge in writing that they have forfeited the right to be recommended for certification.

Students who obtain a failing grade (F, R or NR) in any of the courses listed in paragraphs (1) and (2) above will be required to withdraw from the programme and will also be so informed in writing by the Director of the TESL Centre.

To be recommended for certification in Québec, students must demonstrate reasonable fluency in French.

In the event that a student meets regular University standards but does not satisfy the requirements for recommendation for certification, the student may apply to receive the University degree or certificate but will not be recommended to the Ministry.

NOTE V: Upon admission, students may be granted exemptions from courses in TESL programmes if they have completed equivalent work at the university level.
Replacement for these exemptions must be made in accordance with the guidelines established by the TESL Centre and approved by the University. Copies of these guidelines may be obtained in the TESL Centre.

Courses in English as a Second Language are designed for students who are not native speakers of English and who need further training in the effective use of English in the university setting. Students must be tested for placement in ESL 207, 208, 209, or 210. Information about placement testing schedules may be obtained from the English Language Proficiency Testing Office, TESL Centre, 2155 Guy, Room 601-3, Tel. (514) 848-2454. A special examination fee is charged. (See §15.1)

Written work may be required in English for these courses; please consult with the Department.
Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

NOTE: Students enrolled in a 90-credit degree or an extended credit degree programme in the Faculty of Arts and Science may take ESL courses for degree credit, up to a maximum of six credits.

ESL 207 ***English Language — Intermediate I*** (3 credits)
Prerequisite: Placement by the Concordia English Language Diagnostic Test. A course for students who are not native speakers of English and who need further training in the effective use of English in the university setting. Emphasis is on reading, writing, speaking, and listening skills.
NOTE: Students who have completed ESL 100 or have received credit for ENGL 205 or 206 may not take this course for credit.

ESL 208 ***English Language — Intermediate II*** (3 credits)
Prerequisite: ESL 207 or placement by the Concordia English Language Diagnostic Test. This course is a continuation of ESL 207.
NOTE: Students who have completed ESL 100 or have received credit for ENGL 205 or 206 may not take this course for credit.

ESL 209 ***English Language — Advanced I*** (3 credits)
Prerequisite: ESL 208 or placement by the Concordia English Language Diagnostic Test. This course is for students who are not native speakers of English. It encourages the development of effective written communication and improved reading comprehension, so that students may perform competently in their other university work.
NOTE: Students who have received credit for ESL 201 or ENGL 205 or 206 may not take this course for credit.

ESL 210 ***English Language — Advanced II*** (3 credits)
Prerequisite: ESL 209 or placement by the Concordia English Language Diagnostic Test. This course is a continuation of ESL 209. Emphasis is upon writing the academic research paper.
NOTE: Students who have received credit for ESL 201 or ENGL 205 or 206 may not take this course for credit.

ESL 290 ***Communication through the Study of Special Topics*** (3 credits)
Prerequisite: Successful completion of ESL 201; ESL 209 or tested equivalence. This course is for non-native speakers of English only. Its primary aim is to increase students' oral fluency in English; its secondary aim is to encourage improved levels of competence in the other language skills: listening, reading, and writing.

TESL 201 ***Speech*** (3 credits)
This course is open only to non-native speakers of English. The aim of the course is to prepare ESL teachers who are not native speakers of English to analyze pronunciation difficulties in terms of the major phonetic and phonemic features of English. Emphasis is placed on appropriate instruction for improving pronunciation.
NOTE: The only TESL programmes toward which the course may be credited are the BED (TESL) and TESL Certificate (Sequence I).
Students who have received credit for TESL 221 may not take this course for credit.

TESL 203 ***Effective Communication*** (6 credits)
This course is open only to students who are not native speakers of English. The aim of the course is to raise the level of oral and written communication of ESL teachers who are not native speakers of English.
NOTE: The only TESL programme toward which the course may credited is the TESL Certificate (Sequence I).

TESL 205 ***Introduction to the Structure of English*** (3 credits)
This course is open only to students who are not native speakers of English. The structure of English is examined together with ways of using this knowledge for the effective teaching of English as a second language.
NOTE: The only TESL programmes toward which the course credited are the BEd (TESL) and TESL Certificate (Sequence I).
Students who have received credit for TESL 231 may not take this course for credit.

TESL 211 ***Introduction to Language and Applied Linguistics*** (3 credits)
In this course, selected characteristics of language and linguistics are described. Related fields such as psycholinguistics, sociolinguistics, neurolinguistics and anthropological linguistics are examined. The relevance of work in these areas for language learning and teaching is discussed.
NOTE: This course is open only to students with fewer than 12 TESL credits.

TESL 221 ***Comparative Phonetics*** (3 credits)
This course is specifically designed for students who intend to teach ESL. It provides an introduction to the sound systems of English and French. It compares the two systems and emphasizes techniques for teaching pronunciation in ESL classes.
NOTE: When the course is offered to a group preparing to teach students whose first language is not French, the course content may be adjusted to suit their specific needs.
NOTE: Students who are required to take ESL courses must complete them before commencing TESL 221.

TESL 231 ***Modern English Grammar I*** (3 credits)
This course is primarily designed for students who intend to teach ESL. The course involves a study of important aspects of English structure. It aims to prepare students to apply their knowledge of grammatical structure to the teaching of ESL, for example in the identification and analysis of errors and in the preparation of pedagogical materials.
NOTE: Students who are required to take ESL courses must complete them before commencing TESL 231.

TESL 232 ***Modern English Grammar II*** (3 credits)
Prerequisite: TESL 231. This course continues the study of English grammatical structure begun in TESL 231. It aims to increase students' knowledge in this field and to improve their ability to apply this knowledge to the teaching of ESL.
NOTE: Students who have received credit for TESL 431 may not take this course for credit.

TESL 298 ***Selected Topics in TESL*** (3 credits)

TESL 299 ***Selected Topics in TESL*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

TESL 318 ***The Teaching of Reading and Writing*** (3 credits)
Prerequisite: 9 TESL credits including TESL 324. The course examines the theoretical and research basis for current practice in the teaching of reading and writing. Students become familiar with the concerns and practices of those investigating the development of reading and writing in second language learners in particular, and become aware of how this is related to teaching materials and activities.

TESL 324 ***Methodology I*** (3 credits)
Prerequisite: TESL 221; TESL 231 or TESL 201; TESL 205, each with a grade of C or better, and admission to a TESL programme or permission of the Department. This course reviews current theory in applied linguistics which relates directly to teaching and learning ESL in the classroom. Techniques and methods appropriate to child, adolescent, and adult learners are discussed and demonstrated. In this course the emphasis is on classroom-oriented techniques and materials related to the teaching of listening and speaking.
NOTE: A student must have achieved at least a C in this course in order to be recommended for teacher certification upon completion of the programme.

TESL 341 ***Language Acquisition*** (3 credits)
Prerequisite: TESL 221; TESL 231 or permission of the Department. This course analyzes developmental processes of both native language and second language acquisition. Research is examined in terms of implications for second language teaching.

TESL 351 ***History and Development of the English Language*** (3 credits)
Prerequisite: TESL 221; TESL 231, or permission of the Department. A study of the morphological, phonological, syntactical, and semantic changes that have taken place from Proto-Indo-European to the present. Students are required to do elementary linguistic analyses of texts from different stages in the development of the language.

TESL 361 ***Teaching English for Specific Purposes*** (3 credits)
Prerequisite: TESL 324 or permission of the Department. This course provides instruction in the teaching

of language skills to those who require English either as an auxiliary to their scientific, technical or professional skills or as a medium for training in these areas.

TESL 385 ***Observation and Practice Teaching*** (3 credits)
Prerequisite: TESL 324 previously or concurrently. This course is a daytime, fall-term course, taken with the daytime sections of TESL 324 and TESL 413. The course introduces the student teacher to the ESL classroom. Students observe experienced teachers, and have opportunities for micro-teaching, peer teaching, as well as some teaching to ESL students. Opportunities are provided for observation and practice with ESL learners at different ages and levels of proficiency in English.
NOTE: Students who have received credit for TESL 433 may not take this course for credit.
Students must have achieved at least a C grade in this course in order to be recommended for teacher certification upon completion of the programme.
Students will complete the in-school portion of this course in a (M.E.Q.-approved) private or public primary or secondary school (where French is the language of instruction), in order to be recommended for teacher certification at these levels. Teaching practice completed with adults will not qualify students to be recommended for teacher certification.

TESL 398 ***Selected Topics in TESL*** (3 credits)

TESL 399 ***Selected Topics in TESL*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

TESL 413 ***Audio-Visual Aids*** (3 credits)
Prerequisite: TESL 324 previously or concurrently. This course examines audio-visual resources and their effective use in second-language teaching. Students are given experience with the technical equipment generally available for use in second-language classrooms. In addition, students produce their own audio-visual materials.

TESL 415 ***Testing and Evaluation*** (3 credits)
Prerequisite: TESL 324. An introduction to the general purposes and methods of language testing, with a description of the chief characteristics of sound educational measures. The course examines the processes involved in constructing and administering tests designed to evaluate achievement in the ESL classroom.

TESL 424 ***Methodology II*** (3 credits)
Prerequisite: TESL 324. This course continues the presentation of techniques and methods begun in TESL 324. In this course the emphasis is on classroom-oriented techniques and materials related to the teaching of reading and writing.
NOTE: Students must have achieved at least a C in this course in order to be recommended for teacher certification upon completion of the programme.

TESL 433 ***Practicum*** (3 credits)
Prerequisite: TESL 324. This course is open only to students enrolled in Certificate Sequence I or II. In this course students practise techniques which were introduced in their methodology courses. There are opportunities for observation of ESL classes taught by experienced teachers. Techniques presented in TESL 324 and 424 are practised in micro-teaching, peer teaching and sessions with groups of ESL students. Requirements include lesson planning and evaluation of one's own teaching performance.
NOTE: Students must have achieved at least a C grade in this course in order to be recommended for teacher certification upon completion of the programme.
NOTE: Students who have received credit for TESL 385 may not take this course for credit.

TESL 434 ***Error Analysis*** (3 credits)
Prerequisite: 15 TESL credits including TESL 324 and TESL 341. In this course current theories of second language acquisition are reviewed and applied. Each student carries out analyses of ESL learners' language, focussing on patterns of errors. The identification and classification of errors is followed by the development of teaching materials which the student uses in order to help learners overcome some persistent errors.

TESL 442 ***Problems in Bilingualism*** (3 credits)
Prerequisite: 15 TESL credits. This course is an introduction to some linguistic, social and psychological aspects of languages in contact, with particular attention to the situation in Canada. Emphasis is placed on the description and evaluation of different types of bilingual education programmes and the factors which influence the choice of particular models.

TESL 485 ***Internship*** (6 credits)
Prerequisite: TESL 385 or equivalent. An evening section of this course is open to experienced teachers who are currently teaching ESL. Other students will take a daytime, winter-term section, together with a daytime section of TESL 424. Students do supervised teaching in ESL classes. In addition to seminars including demonstrations and discussions on teaching techniques appropriate to different ages and levels

of proficiency in English, students are responsible for teaching a group or groups of ESL learners over a prescribed time period.

NOTE: Students must have achieved at least a C grade in this course in order to be recommended for teacher certification upon completion of the programme.

Students will complete the in-school portion of this course in a (M.E.Q.-approved) private or public primary or secondary school (where French is the language of instruction), in order to be recommended for Québec provincial teacher certification at these levels. Teaching practice completed with adults will not qualify students to be recommended for teacher certification.

NOTE: Students who completed TESL 385 in a primary school will change to a secondary school in this course. Those who taught in a secondary school will change to a primary school.

TESL 491 ***Study in a Special Subject*** (3 credits)

Prerequisite: Permission of the Department. This course provides an opportunity for advanced students to intensify their study beyond the area of specialization already represented by the curriculum. The selected subject varies with the special interest of the instructor conducting the course in any given year.

TESL 492 ***Study in a Special Subject*** (3 credits)

Prerequisite: Permission of the Department. A student repeating TESL 491 registers for credits under TESL 492.

TESL 498 ***Advanced Topics in TESL*** (3 credits)

TESL 499 ***Advanced Topics in TESL*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.330 Theological Studies

Chair
RUSSEL P. MOROZIUK, *Associate Professor*

Associate Professors
PAUL GARNET
JOSEPH HOFBECK
SEAN E. McEVENUE
JOHN J. RYAN
MALCOLM SPICER

Assistant Professor
CHRISTOPHE POTWOROWSKI

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
Students must have their programmes approved by the Department.
All courses in the Department are open to any qualified student of Concordia.

60 BA Honours in Theological Studies

1. Required courses: THEO 300^3, 310^3, 330^3, 350^3, 360^3, 384^3, 387^3, 493^3, 494^3
2. 6 credits must be chosen in each of the theological areas: Old Testament, New Testament, Systematics, History of Christianity, Christian Ethics
3. A maximum of 9 credits may be chosen among the 200-level courses
4. 6 credits must be taken as cognate, offered in another department, from courses such as — Introduction to Philosophy, Critical Thinking, History of the Roman Empire, Biblical Hebrew, Hellenistic Greek, Latin, German.
5. A group of 18 to 24 credits within one area must be elected, in consultation with the Department, in order to provide each student with a degree of expertise in some area of Theology.
6. 6 credits must be taken in a language required for advanced work, such as Biblical Hebrew, Hellenistic Greek, Latin or German.

Students who already had Honours status by June 1, 1977 will continue to be governed by the requirements which applied at the date of their admission to the Honours programme. (Please refer to §16.2.4 of this Calendar.)

54 BA Specialization in Theological Studies

With permission of the Department, a student may be admitted to a Specialization programme.

1. Required courses: THEO 300^3, 310^3, 330^3, 350^3, 360^3, 384^3, 387^3
2. 6 credits must be chosen in each of the theological areas: Old Testament, New Testament, Systematics, History of Christianity, Christian Ethics
3. A maximum of 9 credits may be chosen among the 200-level courses
4. A group of 18 to 24 credits within one area must be elected, in consultation with the Department, in order to provide each student with a degree of expertise in some area of Theology.

36 BA Major in Theological Studies

Required courses: THEO 300^3, 310^3, 330^3, 350^3, 360^3, 384^3, 387^3

12-15 Elective credits. No more than six credits may be taken from among the 200-level courses.

24 Minor in Theological Studies

1. Required course: THEO 201^3
2. No more than 6 further credits from the 200 level
3. A minimum of 9 credits from THEO 300^3, 310^3, 330^3 (or 331^3 and 332^3), 350^3, 360^3
4. A minimum of 6 credits chosen from the 400 level

Because of the renumbering of courses in the Department, students should see §200.1 for a list of equivalent courses.

THEO 201 Introduction to Theology (3 credits)
Key theological concepts such as God, creation, sin, incarnation, redemption, church, last things. The nature of theological inquiry: historical, exegetical and systematizing methods. Both concepts and methods are presented in their historical and ecumenical perspectives. Introduction to the principal aspects of academic theological work.

THEO 210 ***Introduction to Catholic Beliefs*** (3 credits)
The basis and essentials of the Catholic faith: Bible, God, creation, Jesus Christ, Holy Spirit, Church, sacraments, ultimate destiny and salvation. Specific practices and values of the Christian community. The relationship of Church to society as exemplified in social reforms and liberation theology. This course, together with THEO 330 or THEO 350 meets Comité catholique Theology requirements for those intending

to teach Religion in Québec Catholic Primary schools.
NOTE: Students who have received credit for THEO 331 or THEO 332 may not take this course for credit.

THEO 217 ***Christian Mysticism and Psychology*** (3 credits)
The study of Christian mystics and mystical tradition. Attention is given to the nature, meaning and theological and psychological roots of mystical experience and whether the search for such experience is paranormal behaviour or an authentic human endeavour.
NOTE: Students who have received credit for THEO 215, THEO 216 may not take this course for credit.

THEO 219 ***Bible and Western Culture*** (3 credits)
The influence of the Bible on Western culture and civilization in such areas as literature, philosophy, politics, economics, art, architecture, psychology, science and technology.
NOTE: Students who have received credit for THEO 220, THEO 221 may not take this course for credit.

THEO 222 ***Introduction to the Bible*** (3 credits)
How the Bible (Old and New Testaments) came into being. Major figures and events in the light of the historical and cultural background and of a literary analysis of the text.
NOTE: Students who have received credit for THEO 300 or THEO 310 may not take this course for credit.

THEO 226 ***Theology and Myth*** (3 credits)
The nature, function and meaning of myth in Christian theology compared with its function in other fields of human knowledge, such as literature, religion, psychology.

THEO 232 ***Christianity and Society*** (3 credits)
The sociological dimensions of Christianity throughout history. The study of the interchange between social forces and culture on the one hand and the doctrine and institutions of Christianity on the other.

THEO 240 ***Theology and The Imagination*** (3 credits)
Classical art and myth: the poetic foundations of theological discourse and their relation to the imagination of the artist.

THEO 241 ***Theology and the Arts*** (3 credits)
An exploration within recent forms in painting, poetry, and film. Theological reflection to discover the civilizing function of images of God produced by the imagination.

THEO 264 ***Theology and Psychology*** (3 credits)
This course is a theological exploration in psychological studies embracing, a) a critical and constructive consideration of Freud and Jung; b) a survey of neo-Freudian social psychologists, such as Horney and Sullivan; c) a survey of third-force psychologists such as Rogers, Maslow, and May.

THEO 266 ***Theology and Jung*** (3 credits)
The multifaceted methodology of C.G. Jung; themes relating to psychology and theology.

THEO 270 ***Women and the Christian Church*** (3 credits)
An examination of the role of women in the course of the history of the Church. Prototypes and images of women in Scripture and Theological tradition.
NOTE: Students who have received credit for THEO 471, THEO 472 may not take this course for credit.

THEO 298 ***Selected Topics in Theology*** (3 credits)

THEO 299 ***Selected Topics in Theology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

THEO 300 ***The Old Testament*** (3 credits)
A survey of Old Testament texts (in English translation), with an introduction to contemporary methods of interpretation and appreciation.

THEO 310 ***The New Testament*** (3 credits)
The date, authorship, purpose, structure, and sources of the books of the New Testament. Understanding their content in its historical setting.

THEO 330 ***Principles of Systematic Theology*** (3 credits)
An introduction to the types, methods, tools, and sources of theology. The principal themes of Christian theology are investigated according to their biblical, historical, and philosophical roots.

THEO 350 ***Foundations of Christian Ethics*** (3 credits)
An introduction to the study of Christian ethics; the role of Christian beliefs for a new foundation of ethics in the present intellectual, cultural, and historical situation.

THEO 360 ***Introduction to History of Christianity*** (3 credits)
The historical dimensions of Christian existence, its institutions, personalities, major events. Methods of inquiry.

THEO 362 ***History and Theology of the Christian East*** (3 credits)
A survey of the history and theological literature, themes and methods characteristic of the Christian East.
NOTE: Students who have received credit for THEO 444, THEO 462 may not take this course for credit.

THEO 366 ***Protestant Christianity*** (3 credits)
An introduction to the history and theology of the principal movements and major types of denominations which have developed from the Sixteenth-Century Reformation.
NOTE: Students who have received credit for THEO 466 may not take this course for credit.

THEO 369 ***Canadian Church History*** (3 credits)
The history and theological movements that identified the various Christian churches in the Canadian mosaic.
NOTE: Students who have received credit for THEO 468, THEO 469 may not take this course for credit.

THEO 370 ***Christian Liturgy*** (3 credits)
The history and theology of liturgical praxis in Christian tradition.

THEO 372 ***Christian Spirituality*** (3 credits)
Historical and theological study of the literature of spirituality in the various phases of Christian history.

THEO 384 ***Theology of Judaism*** (3 credits)
An introduction to the history, texts and theology of Judaism.
NOTE: Students who have received credit for THEO 382, THEO 383 may not take this course for credit.

THEO 387 ***World Religions*** (3 credits)
An introduction to the history, texts and theology of world religions.
NOTE: Students who have received credit for THEO 385, THEO 386 may not take this course for credit.

THEO 390 ***Controversial Issues in Ethics*** (3 credits)
Examination of controversial issues: e.g., the ethics of medical problems such as AIDS, abortion; moral dilemmas of economic life; relation of ethics to politics: peace, war, etc.
NOTE: Students who have received credit for THEO 456, THEO 457 may not take this course for credit.

THEO 398 ***Selected Topics in Theology*** (3 credits)

THEO 399 ***Selected Topics in Theology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

NOTE: All 400-level Theology courses have as their prerequisite an appropriate 300-level Theology course, or its equivalent, with permission of the Department.

THEO 405 ***The Pentateuch*** (3 credits)
Prerequisite: THEO 300, or its equivalent with permission of the Department. A reading of selected passages. Discussion of current research into the meaning of these ancient books. Methods of inquiry and their application.

THEO 406 ***The Historical Books*** (3 credits)
Prerequisite: THEO 300, or its equivalent with permission of the Department. A reading of selected passages. Methods of interpreting historical texts in the Old Testament and of determining both their historicity and their meaning are discussed and applied.

THEO 407 ***The Prophetic Traditions*** (3 credits)
Prerequisite: THEO 300, or equivalent with permission of the Department. A reading of selected passages. Historical backgrounds are studied. Current methods for interpreting ancient literature are discussed and applied.

THEO 408 ***The Psalms and Wisdom Literature*** (3 credits)
Prerequisite: THEO 300, or equivalent with permission of the Department. A reading of selected passages. Current methods for interpreting ancient literature are discussed and applied. A variety of literary genres, literary forms, and theological themes are identified and analyzed.

THEO 409 ***Seminar in Old Testament Literature*** (3 credits)
Prerequisite: THEO 300, or its equivalent with permission of the Department. A specific book of the Old Testament is studied in the light of ancient and modern commentaries and of current research.

THEO 411 ***The Synoptic Gospels*** (3 credits)
Prerequisite: THEO 310, or its equivalent with permission of the Department. Exegesis of selected passages in the light of recent scholarship. Studies in their doctrinal contents. Historical inquiry into the works and words of Jesus.

THEO 412 ***Acts and the Beginnings of Christianity*** (3 credits)
Prerequisite: THEO 310, or its equivalent with the permission of the Department. Acts, Hebrews, James,

and I Peter: exegesis of selected passages in the light of recent scholarship, studies in their doctrinal contents. Historical inquiry into the life of the early Church.

THEO 414 ***The Johannine Writings*** (3 credits)
Prerequisite: THEO 310, or its equivalent with the permission of the Department. An examination of Gospel, Letters, and Revelation situated within the context of first-century Christian and non-Christian religious thought.

THEO 416 ***The Theology of St. Paul*** (3 credits)
Prerequisite: THEO 310, or its equivalent with permission of the Department. A historical-critical examination of Paul's theological thought, tracing its development through the chronological sequence of his letters. The focus is on what is central and normative for Christian theology and what is particularly relevant for today.

THEO 421 ***Patristics*** (3 credits)
Prerequisite: THEO 360, or equivalent with permission of the Department. The origin and development of theology, monasticism, liturgy, literature, biblical studies and exegesis on the early centuries of Christian history. Representative writings and personalities from the Greek and Latin traditions are selected and studied.

THEO 423 ***History of Christian Thought: Beginnings to Aquinas*** (3 credits)
Prerequisite: THEO 360, or equivalent with permission of the Department. A survey course on the history of Christian thought from the origins of the Christian Church to the High Middle Ages.

THEO 425 ***History of Christian Thought: Thomas Aquinas to the Present*** (3 credits)
Prerequisite: THEO 360, or equivalent with permission of the Department. The theological study of the events and ideas leading from the High Middle Ages through the Reformation into the modern world, with its critical challenges to the Christian churches and their beliefs.

THEO 430 ***The Christian Understanding of God*** (3 credits)
Prerequisite: THEO 330, or equivalent with permission of the Department. A study of the Christian understanding of God in the Bible and Tradition. Selected readings from representative theologians.

THEO 431 ***Theology of Revelation*** (3 credits)
Prerequisite: THEO 330, or its equivalent with permission of the Department. An inquiry into revelation as a central theme of fundamental theology. The contributions of representative theologians to the development of the theology of revelation.

THEO 432 ***Theology of the Human Person*** (3 credits)
Prerequisite: THEO 330, or equivalent with permission of the Department. The study of the human person in biblical literature from the theological perspective. The distinctiveness of theological understanding as compared with the methods of philosophy, psychology, natural sciences, and literary studies.

THEO 434 ***Word and Sacrament*** (3 credits)
Prerequisite: THEO 330, or its equivalent with permission of the Department. The sharing of religious values through spoken word, scriptures, iconic representation. The use of ritual and symbolic communication in sacramental actions, especially in baptism and eucharist. The possibility of transcultural sharing amid cultural diversity.

THEO 438 ***Eschatology*** (3 credits)
Prerequisite: THEO 330 or equivalent with permission of the Department. The interface of Biblical, theological, and scientific data on history, time, death, immortality and the understanding they cast on the ultimate destiny of human beings.

THEO 440 ***Theology of the Church*** (3 credits)
Prerequisite: THEO 330, or its equivalent with permission of the Department. The ministry of Jesus and the post-Resurrection community. Belief in the Holy Spirit's presence in the Church. Tasks of Christians in the world. Faith and freedom. Ecclesial teachership and authority. Pastoral office and ministry.

THEO 442 ***Christology*** (3 credits)
Prerequisite: THEO 330, or equivalent with permission of the Department. The Christian understanding of Jesus the Christ. A biblical, historical and theological investigation of the person and mission of Jesus.

THEO 446 ***Scripture and Theology*** (3 credits)
Prerequisite: THEO 300, or THEO 310, or THEO 330, or the equivalent with permission of the Department. The role played by scriptural interpretation in the formation of theological doctrines from the earliest period of Christian tradition to current time.

THEO 452 ***Bio-Ethics*** (3 credits)
Prerequisite: THEO 350, or equivalent with the permission of the Department or credit in health sciences. A study of the moral aspects of human genetics, experimentation on human beings, behaviour control, health care, death and dying. Those issues of biomedical practices, institutions, and policy-making processes that involve religious values and principles.
NOTE: Students who have received credit for THEO 453, THEO 454 may not take this course for credit.

THEO 455 ***Social Ethics*** (3 credits)
Prerequisite: THEO 350, or its equivalent with permission of the Department. Theological and ethical explorations in the more complex aspects of human life in society: economics, politics, social relations, culture. Major social ethical practices and discourses of the Christian churches.

THEO 458 ***Personal Ethics*** (3 credits)
Prerequisite: THEO 350, or its equivalent with permission of the Department. The ethical and theological interpretations of those aspects of moral life which involve direct inter-personal relationships, such as human sexuality, marriage, family, alternative life-styles, truth telling, friendship, paternalism.

THEO 493 ***Honours Theology Seminar I*** (3 credits)
Prerequisite: Permission of the Department. The topics of the seminar vary from year to year. The seminars focus upon an oral presentation by each student.

THEO 494 ***Honours Theology Seminar II*** (3 credits)
Prerequisite: Successful completion of THEO 493 and permission of the Department. See THEO 493 above.

THEO 498 ***Advanced Topics in Theology*** (3 credits)

THEO 499 ***Advanced Topics in Theology*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.340 Urban Studies

Coordinator
JOHN UDY, *Assistant Professor*

Assistant Professor
JOHN ZACHARIAS

Urban Studies is an interdisciplinary programme, linking core URBS courses with others in Sociology, Political Science, Economics and Geography, to introduce the student to a wide range of approaches to understanding and guiding today's urban environment. Together with fieldwork assignments, the programme provides the necessary background for either post-graduate studies or working directly in fields dealing with functions or processes affecting urban and/or regional development and change.

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
Students should consult with the Programme Coordinator prior to registering for Urban Studies courses. Students exempted from any required courses must replace them with others that are relevant to the programme, chosen in consultation with the Programme Coordinator.

For the following programmes URBS 280^6 may serve as a prerequisite for courses in Urban Sociology, Urban Geography and Urban Politics.

69 BA Honours in Urban Studies

Stage I
6 URBS 280^6
6 SOCI 212^3, 213^3 or ECON 221^3, 222^3
6 ECON 201^3, 203^3
6 GEOG 211^6, or POLI 250^6, or SOCI 203^3, 220^3

Stage II
6 GEOG 331^6
6 SOCI 350^3, 354^3, or SOCI 351^3, 353^3 or POLI 349^3, 352^3
3 ECON 392^3
6 URBS 379^3, 382^3
3 URBS 334^3

Stage III
12 URBS 433^6, 481^6
6 URBS elective credits at 400 level
3 Elective credits chosen from the courses offered by the following departments or programmes: Economics, Geography, Political Science, Science and Human Affairs, or Sociology

66 BA Specialization in Urban Studies

Stage I
6 URBS 280^6
3 SOCI 212^3 or MATH 207^3
6 ECON 201^3, 203^3
6 GEOG 211^6, or POLI 250^6, or SOCI 203^3, 220^3

Stage II
6 GEOG 331^6
6 SOCI 350^3, 354^3, or SOCI 351^3, 353^3, or POLI 349^3, 352^3
3 ECON 392^3
6 URBS 379^6, 382^3
3 URBS 334^3

Stage III
6 URBS 433^6, or 481^6
6 URBS Elective credits at the 400 level
3 Elective credits chosen from the courses offered by the following departments or programmes: Economics, Geography, Political Science, Science and Human Affairs, or Sociology.

42 BA Major in Urban Studies

Stage I
6 URBS 280^6
3 SOCI 212^3 or MATH 207^3
6 ECON 201^3, 203^3

Stage II
6 GEOG 331^6
6 SOCI 350^3, 354^3, or SOCI 351^3, 353^3, or POLI 349^3, 352^3
3 ECON 392^3
3 URBS 379^3, or 382^3

Stage III
6 URBS 481^6
3 URBS elective credits at the 400 level

30 Minor in Urban Studies

6 URBS 280^6
24 Credits chosen from URBS 334^3, 339^3, 382^3, 433^6, 481^6, 485^3, 486^3, 487^3, 488^3; ECON 201^3, 203^3, 392^3; GEOG 331^6; POLI 250^6, 349^3, 352^3; SOCI 350^3, 351^3, 353^3, 354^3

For equivalent course numbers used in previous years, see §200.1.

URBS 280 ***Urban Development*** (6 credits)
This course surveys urban development as a physical phenomenon, created and reshaped by technological change and socio-economic forces. Some reference is made to the part urban planners may play in this process.
NOTE: Students who have received credit for INTE 280 may not take this course for credit.

URBS 334 ***Urban Design Graphic Techniques*** (3 credits)
Prerequisite: URBS 280. This course familiarizes the student with graphic techniques and materials used by planners and urban designers in preparing their plans for public exposition and for implementation.

URBS 379 ***Urban Planning in Historical Perspective*** (3 credits)
Prerequisite: URBS 280. A broad frame of reference is developed by using both evolutionary and archetypal approaches to elucidate both long- and short-term historical perspectives. The evolutionary concept is used to explore the relationship between recent Canadian, American and British planning experience. In contrast, plan form and planning style are shown as dynamic systems of archetypes, responding over time to shifting cultural preoccupations and world views.
NOTE: Students who have received credit for INTE 380, URBS 380 or HIST 380 may not take this course for credit.

URBS 382 ***Legal Aspects of Urban Planning*** (3 credits)
Prerequisite: URBS 280. The legal aspects of land use planning are discussed including zoning, conservation and restoration of historic enclaves and older neighbourhoods, environmental protection and related issues, in the context of legislation and jurisprudence in Québec and Canada since the beginning of the twentieth century.

URBS 433 ***Applied Urban Geography — Urban Design*** (6 credits)
Prerequisite: GEOG 331, or permission of the Coordinator. An applied course in urban design and land use planning. An overview of current theory and practice is balanced, during the second term, by studio-planning projects emphasizing a team approach.
NOTE: Students who have received credit for GEOG 433 may not take this course for credit.

URBS 481 ***Seminar in Urban Studies*** (6 credits)
Prerequisite: URBS 379; URBS 382. 60 credits; enrolment in Urban Studies programme. This is an advanced seminar which studies urban phenomena in the Canadian context. The seminar explores relevant urban issues and seeks the development of urban policy positions. Students are asked to prepare and submit appropriate research policy papers.
NOTE: Students who have received credit for INTE 481 may not take this course for credit.

URBS 483 ***Practical Experience in Urban Planning I*** (3 credits)
Prerequisite: URBS 379; URBS 382. 60 credits; enrolment in Urban Studies programme. This is a field assignment to allow students to gain work experience in the field of urban planning, including job search and interviews. Students are responsible for finding and negotiating their own placements, with the help of a list of potential employers. Occasional seminars will be held to aid students' understanding.
NOTE: Students who have received credit for URBS 482 or INTE 482 may not take this course for credit.

URBS 484 ***Practical Experience in Urban Planning II*** (3 credits)
Prerequisite: URBS 382; URBS 483. 60 credits; enrolment in Urban Studies programme. This is a field assignment to allow students to gain work experience in the field of urban planning, including job search and interviews. Students are responsible for finding and negotiating their own placements, with the help of a list of potential employers. Occasional seminars will be held to aid students' understanding.
NOTE: Students who have received credit for URBS 482 or INTE 482 may not take this course for credit.

URBS 485 ***Special Problems in Planning Practice*** (3 credits)
This course deals with equivocal planning issues related to the conflict between growth and change and the need to maintain community and environmental stability. Subjects examined may include gentrification, public housing, women and the city, and planning in harmony with nature. Particular attention is paid to questions of professional discretion and potential influence raised by such issues.
NOTE: This course is limited to Urban Studies students who have completed 30 Urban Studies credits.

URBS 486 ***Site Selection Criteria*** (3 credits)
Prerequisite: URBS 382; GEOG 331. Site selection and planning of facilities and infrastructure is based on skilful compromise. Understanding the process is the function of this course. Techniques for the planning and evaluation of a number of urban development elements are investigated in the light of planning goals, principles, performance criteria, funds, timing and public participation. Alternative sites are sought and evaluated.

URBS 487 ***The Computer and Urban Planning*** (3 credits)
Prerequisite: URBS 280, URBS 334; INTE 290. This course is to familiarize the student with Geographic Information Systems (GIS) using the City of Montreal's system as a case study.

URBS 488 ***Urban Ecology*** (3 credits)
Prerequisite: URBS 280; URBS 379; URBS 382. This course studies the city as an ecosystem, qualitatively influenced by direct and indirect human interventions. It analyses the city as a support system to sustain human life and provide environmental health for generations to come. The course considers the harmonization of human needs within a sustainable urban environment.

31.400 Computer Science

The Department of Computer Science offers a Minor in Computer Science available to students in the Faculty of Arts and Science. For further details of this programme, see §71.80.5.

31.500 Colleges, Institutes and Schools

The Faculty of Arts and Science is the largest Faculty in the University. In order to combat the depersonalization so often found in a large Faculty, the Faculty of Arts and Science has created smaller, more manageable units offering a personalized approach to education. At present, there are five such units in existence: Liberal Arts College, Lonergan University College, School of Community and Public Affairs, Science College, and Simone de Beauvoir Institute. Each unit is composed of a group of students and Fellows who are united by a particular philosophy of education.

Each unit operates in much the same fashion. Normally a student admitted to the University will enroll in a specific Department-based programme — a Major, Specialization, or Honours. Students in the Liberal Arts College may, however, elect to enroll in the College Major in Western Society and Culture instead of in a Departmental programme. Similarly, students in the Simone de Beauvoir Institute may enroll in a Major programme in Women's Studies. Students attracted by the particular educational opportunities offered by one of the units will apply to the unit in question. Once admitted to the College, Institute, or School of their choice, students may benefit from the academic curriculum, the extra-curricular activities, and social and intellectual environment provided in each of these units. It is the goal of these units to assist students to broaden their specialized disciplinary education with carefully chosen electives, with specially designed tutorials, and with career-oriented advising, all set in a more personal and friendly "university college" environment.

Each unit has a physical location of its own, where its students may gather to exchange ideas, whether in the classroom or in one of the lounges provided for such interaction. As well, there is a library of basic books and periodical literature. From time to time, there will be planned activities, special-interest seminars, and stimulating lectures by invited guest speakers.

Each unit has a group of faculty members from within the University assigned as Fellows or Tutors, whose major function will be to act as student advisers. Together, students and Fellows or Tutors plan a carefully integrated undergraduate programme based on the philosophy of education promoted.

The advantage of this approach to education is that students may utilize the resources of a large Arts and Science Faculty, yet still enjoy the effective interchange of ideas that only a small unit can provide.

31.515 Institute for Co-operative Education

The University offers programmes in the co-operative format in the Departments of Chemistry and Biochemistry, Economics, Exercise Science, Mathematics and Statistics, and Physics in the Faculty of Arts and Science, and in the Centre for Building Studies and the Department of Computer Science in the Faculty of Engineering and Computer Science.

Co-operative programmes in the Faculty of Arts and Science are open to students who are enrolled in many of the Honours and Specialization programmes offered by the above departments.

As it becomes feasible the University may consider offering other disciplines in the co-op format.

(Please see §23 of this calendar.)

31.520 Liberal Arts College

Principal and Core Fellow
HARVEY SHULMAN, *Associate Professor, Political Science*

Vice-Principal
LASZLO GEFIN, *Associate Professor, English*

Permanent Fellows
FREDERICK H. KRANTZ, *Associate Professor, History*
CLAUDE LEVY, *Associate Professor, Études françaises*

Core Fellow
GEOFFREY FIDLER, *Associate Professor, Education*

Fellows
GERALD DEWEY, *Associate Professor, Sociology and Anthropology*
MARCIE FRANK, *Sessional Lecturer*
MABEN POIRIER, *Assistant Professor, Political Science*
MARTIN SINGER, *Associate Professor, History*
IRVING H. SMITH, *Associate Professor, History*
GEZA SZAMOSI, *Science College*

Associate Fellows
OSVALDO CROCI
JADWIGA KRUPSKI, *Lecturer, English*
VIRGINIA NIXON, *Lecturer, Art History*
PHILIP SCHAUS, *Lecturer, Music*

Liberal Arts College provides students with a broad, demanding educational foundation in the liberal arts. Its curriculum is an alternative for students dissatisfied with premature specialization and fragmentation of knowledge. Defining the "liberal arts" in contemporary terms, the College stresses work in a Core Curriculum of related courses, seminars, and tutorials in the humanities, social sciences, art, music, and science. Its core courses stress the acquisition of basic knowledge and research and writing skills, as well as an awareness of interpretative problems and advanced analytic approaches. The Core Curriculum, in turn, makes for informed choices in the College's second major component, advanced work and research in a specific discipline or area.

Objectives

The major goal of Liberal Arts College is to assist the student in the process of becoming an educated person. The College seeks to translate into modern idioms the traditional vision of education as a preparation for life. Its core courses and seminars, sharing a common concern with the changing nature of society and culture, aim at the development of an informed critical consciousness.

Emphasis is also placed on sharpening the basic expressive and analytic tools indispensable to social and cultural understanding. All College students are expected to present, or to acquire, a knowledge of a second language (normally, French), necessary for their research, and to write and to express themselves clearly. Training in research techniques is stressed, and original, independent work encouraged.

Liberal Arts College, linking demanding general education to significant specialization, is committed to serious intellectual work. Through its curriculum, staff, standards, and academic environment, it hopes to communicate the excitement and creativity of such engagement to its students.

Liberal Arts College Admissions and Programme Requirements

Students admitted to the University and seeking to enter the College must have a "B" average from CEGEP, or its equivalent. All students upon admission must demonstrate proficiency in English composition and a second language, or undertake necessary make-up work.* All applicants should apply through the University Admissions Office; they should also call or write the College for an interview. Mature students are admitted to the College on the basis of an interview and an examination of their record. Full-time degree candidates will normally complete their College Core Curriculum within three academic years; part-time degree candidates should complete their College Core Curriculum within six academic years. Students who have been admitted to departmental Honours programmes must maintain a "B" average in their College Core Curriculum; all others must maintain a "C" average in their College Core Curriculum. All Honours students in the College are expected to undertake significant original work, on a staff-guided basis, in their final year.

**Les étudiant-e-s francophones devront donner la preuve de leur connaissance de la langue anglaise.*

Staff

Faculty Fellows chosen from the University's departments form the staff of all College courses, seminars, and tutorials. Teaching Fellows are resident in the College, as is its Principal, who also teaches in the Core Curriculum. It is intended that, each year, a Distinguished Visiting Fellow, selected on the basis of outstanding academic achievement and renown, will be resident and will teach in the College.

Facilities

Liberal Arts College is located on Concordia University's downtown Sir George Williams Campus. Much of its seminar and tutorial teaching is done in the same building that houses the College's Principal and Core Fellows. The College has student study areas, a course-materials library, and audio-visual facilities, as well as Commons Rooms and a collection of important newspapers, journals, and periodicals. The College is the focus of an extra-curricular programme of visiting speakers and cultural events, and is a place where the exchange of ideas and views generated in courses and seminars continues on a more informal basis.

Counselling

Close student-faculty contact and exchange is part of the Liberal Arts College's stress on serious intellectual work. Each student is assigned to a faculty Fellow who acts as a personal adviser, and who follows the student's progress through the College, advising on the choice of disciplinary or area specialization. All students' work is evaluated annually by the Principal and Fellows.

College Council

Council, composed of Fellows and students, is the formal decision-making body of Liberal Arts College. It meets regularly, chaired by the Principal, as a forum in which current issues and future policy are discussed and decisions taken. Council is that body which ensures the democratic participation of all members of the College in its on-going academic and extra-curricular work.

Programmes

All Liberal Arts College students must take the Core Curriculum. These inter-related courses, including seminar and tutorial work, as well as the final-year Integrative Seminar, constitute a significant segment of the course work required for College-sponsored BA programmes. Liberal Arts College stresses Honours work, although a student may, with the permission of the College, combine the Core Curriculum with a departmental Specialization or Majors programme, or with the Individual Studies Programmes. Selected students may, with College permission, be admitted to the College's BA Major in Western Society and Culture.

42 Liberal Arts College — Core Curriculum

Stage I

15 LBCL 291^6, 292^6, 294^3

Stage II

15 LBCL 391^6, 393^6, 394^3

Stage III

12 LBCL 490^6, 493^3, 497^3

In addition to completing the Core Curriculum, students must meet the Faculty of Arts and Science degree requirements and complete a departmental Major, Specialization, or Honours programme, or the Individual Studies Programme or the Major in L.A.C. Western Society and Culture.

The Core Curriculum may also be applied towards Specialization or Honours work in the Individual Studies Programme. (See §31.170 of this calendar).

All College students must consult with a College adviser before selecting courses in other disciplines or fields. Generally, courses in the Liberal Arts College are open only to members of the College.

Honours candidates must maintain a "B" average in their College courses, with no grade lower than a "C". Students in a Major or Specialization programme must maintain a "C" average in their College courses, with no grade lower than a "D".

42 BA Major in Western Society and Culture

Stage I

15 LBCL 291^6, 292^6, 294^3

Stage II

15 LBCL 391^6, 393^6, 394^3

Stage III

12 LBCL 490^6, 493^3, 497^3

The College advises students who are enrolled in the BA Major in Western Society and Culture to take, in addition, some form of concentrated study (Major, Minor, etc.) within a single department or field of study.

Further information on core courses and College programmes generally may be obtained either by writing for the Liberal Arts College Informational Brochure or by calling the Liberal Arts College, Concordia University, 1455 de Maisonneuve Blvd. W., Montréal, Québec, H3G 1M8, tel: 848-2565. Personal interviews with a Fellow of Liberal Arts College may be arranged through the Secretary.

Admission into a Departmental Honours Programme requires the approval of the Department.

Students seeking admission to a Departmental Honours Programme will be bound by the Honours requirements outlined in §16.2.4 of this calendar.

COURSES

LBCL 291 ***Structure and Dynamics of Western Civilization I*** (6 credits)

Prerequisite: Registration in the Liberal Arts College, or permission of the College. This course emphasizes the intellectual, cultural and political traditions from the biblical period and classical antiquity to the mid-seventeenth century. Texts studied are related to changing social and historical contexts. Primary sources may include Plato, *Republic,* Marcus Aurelius, *Meditations,* Thomas Aquinas, *Summa Theologiae,* and Machiavelli, *Prince and Discourses.*

LBCL 292 ***Modes of Expression and Interpretation I*** (6 credits)
Prerequisite: Registration in the Liberal Arts College, or permission of the College. A study of major Western literary, religious, and philosophical traditions, involving the reading and interpretation of significant texts from antiquity to the mid-seventeenth century. Emphasis is placed on development of writing skills and interpretative analysis. Primary texts may include Homer, *Odyssey,* Plato *Symposium,* Augustine, *Confessions,* Dante *The Divine Comedy,* and Racine, *Phèdre.*

LBCL 294 ***History of Art and Music I*** (3 credits)
Prerequisite: Registration in the College, or permission of the College. This course is an integrated study of the nature of the visual arts and music, from antiquity to the mid-seventeenth century. Artistic and musical expression is examined through chronological and thematic approaches, with attention to the relation between art, music and society.
NOTE: Students who have received credit for LCBC 293 may not take this course for credit.

LBCL 298 ***Liberal Arts College Selected Topics*** (3 credits)

LBCL 299 ***Liberal Arts College Selected Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LBCL 391 ***Structure and Dynamics of Western Civilization II*** (6 credits)
Prerequisite: LBCL 291; LBCL 292; LBCL 294 or permission of the College. This course emphasizes the intellectual, cultural and political traditions from the mid-seventeenth century to 1914. Texts studied are related to changing social and historical contexts. Primary sources may include texts from the writings of Rousseau, Wollstonecraft, Marx and Freud.

LBCL 393 ***Modes of Expression and Interpretation II*** (6 credits)
Prerequisite: LBCL 291; LBCL 292; LBCL 294; or permission of the College. A study of major Western literary, religious and philosophical traditions, involving the reading and interpretation of significant primary texts from the mid-seventeenth century to 1914. Emphasis is placed on further developments of writing skills and interpretive analysis. Primary texts may include Milton, *Paradise Lost,* Diderot, *Le neveu de Rameau,* Goethe, *Faust,* Nietzsche, *The Geneaology of Morals,* and Baudelaire, *Les fleurs du mal.*

LBCL 394 ***History of Art and Music II*** (3 credits)
Prerequisite: LBCL 291; LBCL 292; LBCL 294 or permission of the College. This course is an integrated study of the nature of the visual arts and music, from the seventeenth to the twentieth centuries. Artistic and musical expression is examined through chronological and thematic approaches, with attention to the relation between art, music and society.
NOTE: Students who have received credit for LBCL 293 may not take this course for credit.

LBCL 398 ***Liberal Arts College Selected Topics*** (3 credits)

LBCL 399 ***Liberal Arts College Selected Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

LBCL 490 ***Integrative Seminar*** (6 credits)
Prerequisite: LBCL 391; LBCL 393; or permission of the College. This course emphasizes key issues in contemporary society and culture. Major twentieth-century texts and documents — philosophical, literary, political and artistic, as well as analytical materials drawn from history and the social sciences, are read. Primary sources may include de Beauvoir, *The Second Sex,* Bell, *The Cultural Contradictions of Capitalism,* Woolf, *To the Lighthouse,* Levi, *Survival in Auschwitz.*
NOTE: With the permission of the College students may take this course a second time for credit provided that the subject matter is different, and will register under LBCL 491.

LBCL 491 ***Integrative Seminar*** (6 credits)
Prerequisite: Permission of the College. Students who have received credit for LBCL 490 may register for LBCL 491 provided the subject matter is different.

LBCL 493 ***The Sciences and Society*** (3 credits)
Prerequisite: LBCL 291; LBCL 292; LBCL 294; or permission of the College. This course emphasizes the nature of modern science, principally through its development across the nineteenth and twentieth centuries. Primary sources may include Darwin, *Origin of the Species* and Kuhn, *The Structure of Scientific Revolutions.*
MOTE: Students who have received credit for LBCL 392 may not take this course for credit.

LBCL 497 ***Independent Research Tutorial*** (3 credits)
Prerequisite: LBCL 391; LBCL 393; LBCL 493; or permission of the College. Students, under the supervision of College faculty, write a major essay on a topic relating to their previous or concurrent work in the College.

LBCL 498 ***Liberal Arts College Advanced Topics*** (3 credits)

LBCL 499 ***Liberal Arts College Advanced Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.530 Lonergan University College

Principal
CHARLES DAVIS, *Professor, Religion*

Fellows
SZYMON CHODAK, *Professor, Sociology and Anthropology*
JOHN P. DRYSDALE, *Associate Professor, Sociology and Anthropology*
EDMUND EGAN, *Associate Professor, Philosophy*
E. SUSAN HOECKER-DRYSDALE, *Associate Professor, Sociology and Anthropology*
A. NORMAN KLEIN, *Associate Professor, Sociology and Anthropology*
SHEILA McDONOUGH, *Professor, Religion*
SEAN E. McEVENUE, *Associate Professor, Theological Studies*
LEONARD R. MENDELSOHN, *Associate Professor, English*
CHRISTOPHE POTWOROWSKI, *Assistant Professor, Theological Studies*
MORRIS L. SHAMES, *Associate Professor, Psychology*
KATHERINE E. WATERS, *Associate Professor, English*

Associate Fellows
MARIANNE AINLEY, *Adjunct Fellow, Simone de Beauvoir Institute and Women's Studies*
DONALD BOISVERT, *Associate Vice-Rector, Services (Student Life)*
SCOTT EASTHAM, *Assistant Professor, Communication Studies*
WILLIAM GILSDORF, *Associate Professor, Communication Studies*
HORST HUTTER, *Associate Professor, Political Science*
ANNA MARIE KETTER, *Associate Professor, Modern Languages and Linguistics*
MARC LALONDE, *Lecturer, Religion*
CAROLINE MARKOLIN, *Lecturer, Modern Languages and Linguistics*
MARIA PELUSO, *Lecturer, Political Science*
WENDY SIMON, *Lecturer, Printmaking and Photography*
LEONARD SUGDEN, *Associate Professor, Études françaises*

Adjunct Fellows
FRANCIS X. CHARET, *Lecturer, Religious Studies, University of Ottawa*
FLORENCE DAVIS, *Writer*

Dedication
Lonergan University College is named in honour of Dr. Bernard F. Lonergan, a former student, and later a professor of Loyola College, Montreal. Dr. Lonergan's work has been recognized throughout the world and is the subject of several hundred books and dissertations. Recently, an international *Journal of Lonergan Studies* has been initiated in the United States.

General Philosophy
Lonergan University College exists for those of us, both students and professors, who believe in an education beyond the current tradition of depersonalized and compartmentalized knowledge. Lonergan students maintain a regular department-based programme of studies. At the same time, however, they share with others the dynamics of human enquiry that transcends the narrowness of disciplinary methodologies. The unique educational experience at Lonergan can be approached by two questions: what is it that we study and how do we accomplish such a study?

Inquiry into "Value"
The Fellows of Lonergan University College are convinced that the deepest issues of life are implicitly involved in all the academic disciplines, and that both honesty and sanity demand that we attend to this fact and reflect upon it.
The subject matter chosen for the College Seminar (LUCC 399) serves as a focus for each year's activity. There are no limits to the choice of a particular thinker except that he or she be considered as among the foremost in shaping western civilization. In each choice, however, the scholarship is clearly concerned with values: they may be values centred on the question "should it be done?" as opposed to "can it be done?"; they may be values so entrenched in fundamental assumptions as to appear self-evident and beyond argument; or they may be values considered by some to be ultimate and beyond rational understanding. In each case, the value systems are exposed and critically analyzed, allowing the individual to come to his or her own conclusions.

Method
The College has adopted an educational strategy which is interdisciplinary and empirical.
This strategy is *interdisciplinary* and multi-disciplinary because central and ultimate issues of human life are involved in all disciplines; yet many of these issues overlap the traditional boundaries of knowledge and must be analyzed without the dominance of any one perspective.
This strategy is *empirical* in the sense that all knowing begins with enquiry about experience of the world and of ourselves as subjects. Resulting judgement of truth and value must be verified through a methodologically precise appeal to this experience. Following this strategy, Lonergan students use their departmental study as

a resource to be shared and extended by working with students and fellows from other departments on a common intellectual project as determined by one of the Lonergan courses.
The work and method of Bernard Lonergan are studied by many of our students. His influence is reflected in the concept of education at the College whether or not students choose to study his work explicitly.

The Style of the College

Lonergan University College offers its students all the resources of Concordia University. Lonergan students take a regular degree programme in the department of their choice on either of the two campuses of Concordia University. Moreover, the College aims to contribute to a style of life which will heighten intellectual experience and enrich personal growth during the student's university years. It does this, not by claiming to "raise standards", but rather by demanding that its students relate what they learn to their personal lives and deeper values.
A university is the place where the universe should be discussed and intellectually appropriated. Conversation, as much as courses or research, is at the heart of university life. It is precisely this aspect of university life that has been undermined in this century by the incredible growth in knowledge itself, and by the proliferation of specialities. What universal knowledge is now possible? What do students have in common to discuss?
Lonergan University College believes that there is something in common to be discussed, and dedicates its resources to assure the depth and vitality of that discussion. It involves all its members, both students and Fellows, in structured conversation that will grow in breadth and meaning through the three years of a student's university career.

Membership

1. Students usually join the College on a continuous basis by undertaking the College Programme outlined below. This commitment constitutes full membership in the College, and it may be made when the student is first admitted to the College or at a later date. Full members are assigned an academic adviser though they may wish to seek counselling from any of the Fellows should they so wish.
2. Concordia students may also join the College on a yearly basis by registering in one of the College Seminars. Annual membership entitles students to use the College lounges and facilities and to participate in the social activities of the College.
3. Students who complete the Programme will be graduated officially as Lonergan students and will have this fact noted on their transcripts.

Academic Programme

1. Most distinctive in the College Programme is the unique opportunity for students and Fellows to participate each year in a College Seminar.

2. The Lonergan curriculum may be described as a programme of general education, which focuses on "value". Such a study, which is both interdisciplinary and integrative in nature, is designed to complement the student's regular programme of specialized education.

3. Students must meet the degree requirements of the Faculty of Arts and Science, and complete either a departmental or interdisciplinary Major, Specialization or Honours programme.

4. The Lonergan Programme consists of 24 credits outside the above Major, Specialization or Honours. These 24 credits may be taken as follows:

   I) College Seminars (18 credits)

      a) These credits may be amassed over 3 or more years by a succession of 6-credit and/or 3-credit seminars.

      b) Students who are admitted to the College after completing 30 credits at Concordia will be required to complete only 12 credits in College Seminars.

   II) College courses (6 credits)

      a) These courses must be selected in consultation with the student's academic adviser in the College. They may be taken in College Courses listed below, or else from the list of Lonergan-approved electives established each year by the College Curriculum Committee.

      b) Late entrants to the College who have been exempted from seminar credits under I b) above, may complete their general requirements of 24 credits by substituting additional College courses or Lonergan-approved elective courses.

College Facilities and Activities

The College is situated on the Loyola Campus of Concordia University; at 7302 Sherbrooke Street West.
The College is governed by a set of by-laws, and by a College Council composed of students and Fellows.
The central activity of the College is its weekly seminar. The seminar focuses each year on the work of a major thinker, one who has decisively influenced our culture for good or for evil. The topic will change each year, but the depth of human integration and social awareness of the authors we choose ensures continuity in our discussion. As participants in the seminar are competent in diverse academic disciplines, an understanding of the topic develops which on the one hand does justice to the diversity of contemporary awareness, and on the other demands levels of understanding which transcend technical jargon. An internationally recognized scholar

will be invited to come to Lonergan University College as the "Distinguished Visiting Scholar", to lead the College Seminar. The Visiting Scholar will also give university lectures and public addresses, as seem appropriate.
Each student of Lonergan University College joins with a small number of others to form a seminar group. College Fellows will direct the group and be available for academic advising to students. These groups will meet for two hours every week.
Students and Fellows will be encouraged to share in College government, to participate in College events, and, in various ways, to make the College the centre of their lives at the University.
The College offers a comfortable lounge, a specialized library, and several quiet rooms for study. It also has a research centre for Lonergan studies with a complete set of manuscripts, and of published works.

Admissions and Applications
Students seeking admission to the College should fill in the appropriate section (Box D) of the University Admissions Application form. Interested students may also contact the College directly by telephoning 848-2280, or by coming to the College, 7302 Sherbrooke Street West (corner of Sherbrooke and West Broadway Avenue), or else by writing to the College at the following address: 7141 Sherbrooke Street West, Montreal, Quebec, H4B 1R6. Each candidate for admission will be invited to an interview with one of the College Fellows.

COURSES

LUCC 200 ***The Creative Experience of Understanding*** (6 credits)
This course deals with questions such as how ideas develop, what it means to understand and how human knowing is creative. Once aware of the creative process in their own thinking, students are helped to recognize its presence in the diverse kinds of thinking represented in such major thinkers as studied in the Lonergan University College interdisciplinary seminar (LUCC 399).

LUCC 398 ***Special College Seminar*** (3 credits)
Students who for good reason cannot follow the regular College Seminar (LUCC 399) meet every second week for two semesters or every week for one semester, under the direction of a College Fellow. The same text is read as in the regular seminar, and the discussion has the same aim.

LUCC 399 ***Lonergan College Seminar*** (6 credits)
A different work is selected by the College Council each year from among those classics which have shaped our civilization. In the past the following were selected: Bernard Lonergan, Carl Jung, Northrop Frye, Niccolo Machiavelli, Teresa of Avila, Charles Darwin, Sigmund Freud, and Dante. The seminar meets each week through two semesters, to read segments of the work in appropriate intellectual contexts, and to move eventually to a personal, value-oriented, dialectic with the work. One week the Fellows discuss with the Visiting Scholar with limited student participation. The following week students meet in small groups with individual Fellows to deepen and broaden discussion.

LUCC 400 ***Generalized Empirical Methods*** (3 credits)
This course engages students in the task of integrating their university discipline into the more general enterprise of human knowing and deciding. Students reflect on their personal experience of knowing and deciding, and attempt to objectify this experience with the aid of a basic study of generalized empirical methodology. The text is selected from the works of Bernard Lonergan or of other comparable theorists.

LUCC 410 ***Introduction to the Works of Bernard Lonergan*** (3 credits)
A selection of Lonergan's works is read and discussed.

LUCC 498 ***Lonergan University College Selected Problems*** (3 credits)

LUCC 499 ***Lonergan University College Selected Topics*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.540 School of Community and Public Affairs

Principal
DANIEL SHAPIRO, *Associate Professor, Economics*

Vice-Principal
MARGUARITE MENDELL, *Research Fellow, Political Science*

Fellows
GRAHAM CARR, *Assistant Professor, History*
HAROLD CHORNEY, *Associate Professor, Political Science*
WILLIAM GILSDORF, *Associate Professor, Communication Studies*
ANDREW B. GOLLNER, *Associate Professor, Political Science*
HUBERT GUINDON, *Professor, Sociology and Anthropology*
GUY LACHAPELLE, *Associate Professor, Political Science*
GUY LeCAVALIER, *Associate Professor, Sociology and Anthropology*
DANIEL SALEE, *Assistant Professor, Political Science*

Adjunct Fellow
KARI LEVITT, *Professor, Economics, McGill University*

Associate Fellows
STEPHEN BLOCK, *Lecturer, School of Community and Public Affairs*
MARVIN HERSHORN, *Lecturer, Political Science*
MARC LESAGE, *Lecturer, School of Community and Public Affairs*

Objectives of the School

The School of Community and Public Affairs (SCPA) offers students multi-disciplinary training in policy analysis and policy advocacy. The objective of the School is to prepare students to be intelligent participants in the policy process at either the community, corporate or government levels. Through an innovative combination of academic and practical training, we seek to produce graduates who are sensitive to a broad range of public issues.

Specialists in community and public affairs are engaged in the policy arena. They share in common the ability to research, analyse, communicate and organize. They are employed as public affairs specialists in corporations; public policy analysts in government and non-government organizations; journalists; and consultants to community groups, unions, firms, and political parties.

Students in the School will benefit from a unique programme with the following components:

1. an internship within which students will receive credit for work in a public-affairs-related job;
2. a bilingual environment;
3. a unique curriculum which combines specialization in a discipline with multi-disciplinary seminars;
4. small classes emphasizing personal contact and group projects;
5. an environment which encourages participation and involvement.

The School will be of interest to excellent students in a variety of disciplines, including economics, history, political science, sociology, urban studies, journalism, communication studies, and business. While some of our students enter the work force upon completion of their undergraduate degree, the majority continue their education. SCPA graduates tend to do graduate work either in their disciplines or, more often, in professionally-oriented programmes including Public or Business Administration, International Affairs, Industrial Relations and Law.

The historic Mackay Street building which the School occupies is an ideal site for small classes, public lectures, social events and meetings. School facilities include a common room, a reading room and documentation centre, a seminar room, a computer room and faculty and student offices.

The School Programme

Students who enrol in the School of Community and Public Affairs will follow a programme composed of the following elements:

1. The Core Courses
(36 credits)

All students must take the following:

ECON 201	Introduction to Microeconomics	(3 credits)
ECON 203	Introduction to Macroeconomics	(3 credits)
HIST 205	History of Canada, Post-Confederation	(3 credits)
POLI 250	Canadian Government and Politics	(6 credits)
SOCI 203	Introduction to Society	(3 credits)
SCPA 300	Integrative Seminar	(6 credits)

SCPA 401 Modular Seminar (3 credits)
SCPA 411 Internship (3 credits)
SCPA 412 Research Seminar (3 credits)

3 credits Chosen from SCPA 498[3], COMS 461[3], FRAN 312[3], MATH 207[3] (or equivalent), SOCI 353[3], MANA 266[3]

NOTE: Students who take one or more of the required courses as part of their degree programme must replace the credits with a course chosen in consultation with the SCPA adviser. Under special circumstances, a student may replace one of the elective courses with a course chosen in consultation with the SCPA adviser.

2. The Disciplinary Programme
Members of the School of Community and Public Affairs must also pursue a departmental or interdisciplinary Honours, Specialization or Major programme.

Performance Requirement and Exemptions Policy
Students are required to maintain an average of B- in the Core courses of the School and an overall average of C. In addition, all members of the School are expected to participate in its operation.
Where exemptions are granted for any of the Core courses, students are required to replace them with an equal number of credits chosen in consultation with the SCPA adviser.

Entrance Requirements
Students admitted to the University and seeking to enter the School must have achieved a "B" average, or the equivalent at the previous educational level. Students wishing to enter the School will be interviewed personally. In exceptional circumstances, a candidate who has failed to meet the grade requirement will be admitted on the basis of a personal evaluation of potential capacities, as against those realized in previous studies. Each student enrolled in the School will have to demonstrate a working knowledge of English and French.
For further information on curriculum, programmes, personnel, and objectives, please call the Principal, at 848-2575.

COURSES

SCPA 298 ***Selected Topics in Community and Public Affairs*** (3 credits)

SCPA 299 ***Selected Topics in Community and Public Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCPA 300 ***Integrative Seminar*** (6 credits)
Prerequisite: Permission of the School of Community and Public Affairs. This course takes a multidisciplinary approach to the problems of decision-making and policy formulation, with particular attention paid to the complex interaction among groups and institutions in society. The course is designed to provide insights into the design, implementation and evaluation of policies. Special emphasis is placed on data and information analysis and communication skills. Topics covered include: the state and public policy; business, government and society; labour and unions; non-profit and community groups; interest groups and policy agendas; media and society; international institutions.

SCPA 398 ***Special Area Study in Community and Public Affairs*** (3 credits)

SCPA 399 ***Selected Topics in Community and Public Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCPA 401 ***Modular Seminar*** (3 credits)
Prerequisite: SCPA 300 and permission of the School of Community and Public Affairs. This seminar is normally taken by students in their second year. Under the direction of a Fellow, the Seminar consists of a series of "modules" of approximately 3 weeks' duration. The modules are both skill and problem oriented and draw on the expertise of both academics and practising professionals drawn from public and private agencies. Topics vary from term to term, but focus on specific functions and areas in public affairs in order to equip students with a range of skills needed to pursue careers in the field.

SCPA 411 ***Internship*** (3 credits)
Prerequisite: Permission of the School of Community and Public Affairs. An essential part of the School's programme is a one-semester apprenticeship in some aspect of community and public affairs. After completing 60 credits of the BA programme, including a significant portion of the School's core, students are required to complete a practicum that will allow them to test their ideas in a real situation. Placements may be drawn from all areas of possible employment, including the private sector, government and community service organizations. Students are expected to participate fully in finding and defining possible

internships. Employers are asked to join in an evaluation of the work period. Students are required to submit a written report which summarizes and evaluates their work experience.

SCPA 412 ***Research Seminar*** (3 credits)
Prerequisite: SCPA 411. Students who have completed their internship are required to define a set of problems, normally based on some aspect of their practical experience. They then define a policy agenda on which further research is undertaken. Working in groups, they organize a series of seminars relating to the policy agenda. These seminars are presented by academics and practising professionals and are open to all members of the School. In unusual circumstances, SCPA 412 may be taken concurrently with SCPA 411 with permission of the School.

SCPA 498 ***Advanced Seminar in Community and Public Affairs*** (3 credits)

SCPA 499 ***Advanced Topics in Community and Public Affairs*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.550 Science College

Principal
GEZA SZAMOSI

Fellows
PAUL J. ALBERT, *Associate Professor, Biology*
PETER H. BIRD, *Professor and Chair, Chemistry and Biochemistry*
STEPHEN J. DAUNT, *Associate Professor, Chemistry and Biochemistry*
NELSON W. EDDY, *Associate Professor, Physics*
ANN ENGLISH, *Associate Professor, Chemistry and Biochemistry*
MURIEL B. HERRINGTON, *Associate Professor, Biology*
CALVIN S. KALMAN, *Professor, Physics*
HERSHY KISILEVSKY, *Professor, Mathematics and Statistics*
MELVIN K. KOMODA, *Associate Professor, Psychology*
STEPHEN KUMARAPELI, *Professor, Geology*
CLEMENT LAM, *Professor, Computer Science*
COOPER H. LANGFORD, *Professor, Chemistry and Biochemistry*
EDWARD J. MALY, *Professor, Biology*
JOHN McKAY, *Professor, Computer Science*
SHEILA MASON MULLETT, *Associate Professor, Philosophy*
ELAINE B. NEWMAN, *Professor, Biology (Founding Principal)*
ROBERT M. ROY, *Associate Professor, Biology*
RAMESH C. SHARMA, *Associate Professor, Physics*
PETER SHIZGAL, *Professor, Psychology*
JANE STEWART, *Professor, Psychology*
REGINALD STORMS, *Associate Professor, Biology*
MANFRED SZABO, *Professor, Mathematics and Statistics*

In Science College, students will gain an understanding of several areas of science, while specializing in whichever one they choose. Curricular structures frequently restrict students to a single discipline. To help counteract excessive specialization, the Science College has designed a series of courses to show what practising physicists think about physics; what mathematicians do when they are thinking mathematics: — not "an introduction to", but "the state of the art".

The College provides an opportunity for students to become acquainted with science as practised and understood by scientists today. Its curriculum is planned to fulfill the primary goals of the College — to provide an opportunity for experience in a research environment, for thinking about the nature of science, and for becoming aware of the style and content of the various scientific disciplines.

In Science College, students have the opportunity to work individually with active research scientists. This is done through a programme of directed or independent study in each undergraduate year which enables them to undertake or participate in projects of discovery in a variety of different areas of scientific endeavour.

Students of the College will also be provided with an opportunity to consider the nature of science. The College offers courses in the intellectual and social context of science. Designed specifically for College students, these courses raise questions of broad interest to scientists and presume an understanding of the subject matter of science itself.

Students will also be given the opportunity to consider the social and cultural framework of their science studies through a basic course in some aspect of humanistic studies. This will bring them into intellectual contact with students in our fellow College of Liberal Arts.

Finally, students will be encouraged to appreciate the link between clarity of thought and clarity of expression, through the availability of tutorial assistance in the development of writing skills.

Facilities

The College is located in its own annex on Concordia University's downtown Sir George Williams Campus. The College has study and lounge areas, computer facilities, a small library and a collection of periodicals of general interest. The College offers students the opportunity and facilities to discuss matters of interest among themselves and with their professors. Science College also offers a number of courses and invites scientists to visit the University to meet College students.

Requirements for Admission to Science College

The programme of Science College is academically demanding, involving concentration in one discipline and a critical investigation of other aspects of science. The College is committed to serious academic work and high standards, and seeks to attract talented and enthusiastic students who are willing to work hard in a search for a deeper understanding of their subject.

Science College represents a new departure at Concordia's downtown campus. Students must enrol in a science programme that leads to a BSc degree in order to be part of Science College. Students registered for a BA in Journalism are also eligible, as are students registered in the General Science Option of Computer Science.

In addition to the normal requirements for admission to the University's various programmes, applicants are expected to have a good academic average. They will be considered on the basis of their academic record, and a personal interview. Preference will be given to students who show a disposition and an aptitute to profit from the unique features of the sort of fundamental scientific education which the College offers. Applicants are encouraged to provide evidence of the range of their intellectual interests and of any creative activity in which they may have been involved.
Students must be prepared to attend courses at times outside the normal University schedule. The College is open to full-time students only.

Science College and Journalism
A limited number of students who have been admitted to the Major in Journalism programme may be allowed to register in the Science College, with a view to combining a basic understanding of science with a training in journalism. For such students, a second six-credit course in the historical, philosophical, and social aspects of science will be offered. Other members of the College will have the option of taking this course if they so desire.

Performance Requirement
Students in the College must maintain a "B" average in courses offered by the College, with no grade lower than a "C".

Further Information
Further information on the courses and activities of the Science College may be obtained either by writing to:

Concordia University
Science College
Annex X
1455 de Maisonneuve Blvd., West
Montréal, Québec H3G 1M8

or by telephoning the College office at 848-2595. Personal interviews with a Fellow of the Science College may be arranged through the Science College office.

Science College Core Curriculum
The College offers a core of courses which are required of all students. This core consists of 30 of the 90 credits normally required for a BSc degree. These courses have been developed specifically for the College with the intention of providing a unique, integrated programme of education in science.

PROGRAMMES
In addition to completing the Core Curriculum, students are responsible for satisfying their particular degree requirements by completing a departmental Honours, Specialization, or Major programmme leading to a BSc.
The superscript indicates credit value.

30	**Science College Curriculum**
3-9	SCOL 251^3, 252^3, 253^3, 351^3, 352^3, 353^3
6	SCOL 270^6
3-6	Chosen from LBCL 291^6, 292^6, 293^6
6	SCOL 290^3, 390^3
6	SCOL 490^6
3-9	SCOL 398^{3*}

**This course may be repeated twice for credit in this programme provided the subject matter is different.*

COURSES

SCOL 251 ***Current Issues in Physical Sciences I*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. These courses are designed to help students understand the "state of the art" in fields of science in which they are not specializing. They discuss problems under current study, and attempt to identify possible future directions of research. The approach is qualitative. Detailed technical knowledge is not prerequisite.

SCOL 252 ***Current Issues in Biological Sciences I*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. For description see SCOL 251 above.

SCOL 253 ***Current Issues in Mathematical and Related Sciences I*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. For description see SCOL 251 above.

SCOL 270 ***Historical, Philosophical, and Social Aspects of Science*** (6 credits)
Prerequisite: Membership in the Science College, or permission of the College. This course discusses the intellectual framework of science and the relationships between science and society, and the political and

philosophical questions inherent in the scientific process. This course is primarily intended for College students and relies heavily on primary sources. Students are expected to understand the scientific issues at the level at which they were originally addressed.

SCOL 290 ***Directed and Independent Study I*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. The student works under the supervision of a member of the Faculty on either a practical laboratory project or a literature study. A formal, written report is required.

SCOL 298 ***Selected Topics in a Scientific Discipline*** (3 credits)

SCOL 299 ***Selected Topics in a Scientific Discipline*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCOL 351 ***Current Issues in Physical Sciences II*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. For description see SCOL 251 above.

SCOL 352 ***Current Issues in Biological Sciences II*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. For description see SCOL 251 above.

SCOL 353 ***Current Issues in Mathematical and Related Sciences II*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. For description see SCOL 251 above.

SCOL 390 ***Directed and Independent Study II*** (3 credits)
Prerequisite: Membership in the Science College, or permission of the College. A student who has completed SCOL 290 registers for SCOL 390. Students are encouraged to work in a field different from that of their SCOL 290 project.

SCOL 398 ***Topics for Multidisciplinary Study*** (3 credits)
The purpose of this course is to introduce students to problems and areas of study which transcend traditional disciplinary barriers. A chosen area of investigation is treated from the viewpoint of various disciplines. Lecturers from different areas may be used for this purpose. The aim is to show the contributions made by each field to the understanding of the problem, and how they complement each other.

SCOL 399 ***Topics for Multidisciplinary Study*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

SCOL 490 ***Directed and Independent Study III*** (6 credits)
Prerequisite: Membership in the Science College, or permission of the College. A student who has completed SCOL 390 registers for SCOL 490. Students are encouraged to work in a field different from that of their SCOL 290 and 390 projects. Students complete a research project approved in advance by the College, under the supervision of a Fellow of the College and/or a faculty member in a scientific discipline.
NOTE: After consultation with the Science College, a student may register in BIOL 490, CHEM 450, GEOL 414 or PSYC 430 and upon successful completion be exempted from SCOL 490.

SCOL 498 ***Advanced Topics*** (3 credits)
(Will not be offered in this academic year.)

SCOL 499 ***Advanced Topics*** (6 credits)
(Will not be offered in this academic year.)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

31.560 The Simone de Beauvoir Institute and Women's Studies

Principal
ARPI HAMALIAN, *Associate Professor, Education*

Assistant Professor
CHANTAL MAILLÉ

Visiting Assistant Professor
SHERENE RAZACK

Resident Fellows
LUCIE LEQUIN, *Sessional Lecturer, Études françaises*
MAIR VERTHUY, *Associate Professor, Études françaises*

Associate Fellows
DOLORES GOLD, *Professor, APC Psychology*
E. SUSAN HOECKER-DRYSDALE, *Associate Professor, Sociology and Anthropology*
CORRINNE JETTE, *Lecturer, Engineering and Computer Science*
ROSEMARIE SCHADE, *Assistant Professor, History*
FRANZISKA E. SHLOSSER, *Associate Professor, History*
CLAUDIE SOLAR, *Adviser to the Rector, Status of Women*
MARILYN TAYLOR, *Associate Professor, Applied Social Science*
THOMAS WAUGH, *Associate Professor, Cinema*

Adjunct Fellows
MARIANNE AINLEY, *SSHRC Independent Scholar, History of Canadian Women Scientists*
BARBARA FREEMAN, *Assistant Professor, Journalism, Carleton University*
NILIMA GIRI, *Independent Scholar, Indian Women's Education*
HOMA HOODFAR, *Visiting Scholar, Sociology and Anthropology (Kent, U.K.)*
PATRICIA HORNE, *Independent Scholar, COSATU Affiliate, South Africa*
BARBARA MEADOWCROFT, *Independent Scholar, Canadian English Literature*
BETT MILLER, *Independent Scholar, Comparative Literature (University of California, San Diego)*
ANTOINETTE MOALBAYE, *Independent Scholar, PhD in Comparative Literature, African Women's Studies*
CHENGIAH RAGAVEN, *Independent Scholar, Women and Genocide*
NANCY THÉBERGE, *Associate Professor, Sabbatical Scholar, Sociology, University of Waterloo*
JUDITH WHITEHEAD, *Independent Scholar, Women's Studies, Anthropology*

Honorary Fellows
PATRICIA MORLEY, *Professor, English*
JO VELLACOTT, *SSHRC Research Fellow, History, Peace Studies*

SIMONE DE BEAUVOIR INSTITUTE

Founded in 1978 to promote the understanding of the historical and contemporary situation of women in society, the Simone de Beauvoir Institute of Concordia University helps women to discover and develop their potential, both by its academic base in Women's Studies and by its co-curricular activities. We are honoured that Simone de Beauvoir authorized us to use her name, and expressed great interest in being informed of our activities until her death.

All students registered in the Major, Minor or Certificate in Women's Studies are normally members of the Institute. Other undergraduate students are welcome to become members if they undertake to complete nine credits of WSDB courses.

The co-curricular life of the Institute is extremely important, and all members are expected to contribute to our activities. Exciting opportunities are available to organize workshops, colloquia and debates on subjects which interest the members, as well as to collaborate with women's organizations outside the University on research projects and other joint ventures.

Admission Requirements for the Simone de Beauvoir Institute

Students may apply simultaneously to Concordia University and the Simone de Beauvoir Institute by filling out and submitting the Concordia University Application for Admission with the box for "colleges" checked and "Simone de Beauvoir Institute" written in the space provided. The Admissions Office will inform us of your application as soon as they receive it. Further information about the Institute can be obtained by calling us at 848-2370 or by visiting our offices.

Student members of the Institute are required to complete nine credits chosen from WSDB courses. The choice of these courses must be approved in advance by the Principal or her delegate.

Location

The main centre for the Institute is 2170 Bishop Street on the Sir George Williams Campus. It includes faculty and secretarial offices, a lounge, a reading and a seminar room; there is also an office and a lounge on the Loyola Campus.

Women's Studies encompass and modify all areas of knowledge. Through the introduction of new perspectives and new research, this field of study helps to correct and complete the traditional scholarly record. It is in essence interdisciplinary and multidisciplinary since the specificity of the condition of women embraces all existing disciplines. It thus questions the concept and structures of knowledge contained within the disciplinary boundaries and contributes to bringing about a reunification of the knowledge and scholarship that has become increasingly fragmented.

The objectives of programmes in Women's Studies may be summarized as follows: to raise fundamental questions about women in society, using a scientific and academic approach; to stimulate interest in and support of research topics relevant to women and social change; to investigate our socio-political and cultural backgrounds and their effect on the status of women; to engage in a continuous evaluation of research into the history, conditions and changing needs of women; to promote the understanding of the historical and contemporary role of women in society; to encourage a new and full recognition of the contribution of women to human achievement; to ensure that women and issues of gender are studied in a non-discriminatory manner as part of the curriculum either in separate distinguishable Women's Studies courses or in courses so modified as to give women's perspective its rightful place; to strengthen and widen women's rights by providing the conditions which allow women to exercise those rights; to ensure the equality of all individuals without distinction of race, sex, age, language or religion and thus transform society.

NOTE: The "SDEB" and "WMNS" designations for Women's Studies courses have been changed to "WSDB".

PROGRAMMES

Students are responsible for satisfying their particular degree requirements.
The superscript indicates credit value.
Students should consult with the Women's Studies Adviser prior to registering for Women's Studies courses.

39 BA Major in Women's Studies

Group I

6 WSDB 290^3, 291^3
6 WSDB 390^3, 391^3, 392^3, 393^3, 394^3
6 WSDB 490^3 or 492^3, 491^3 or 493^3
3 300- or 400-level WSDB courses

Group II

18 Chosen in consultation with the Women's Studies Adviser from WSDB 370^3, 390^3, 391^3, 392^3, 393^3, 394^3, 398^{3*}, 399^{6*}, 498^{3*}, 499^{6*}; CLAS 354^3, 355^3; ECON 397^3; EDUC 321^3; ENGL 249^3, 250^3, 251^3, 252^3; FMST 329^3; FRAN 254^{3**}, 451^3, 476^3, 477^3; HIST 329^3, 331^3; PHIL 230^3; POLI 334^6; PSYC 390^6; RELI 333^3, 334^3; SOCI 372^6; THEO 270^3

**This course may be repeated twice for credit in this programme provided the subject matter is different.*
***NOTE: Les étudiant-e-s francophones ne peuvent s'inscrire à ce cours.*

27 Minor in Women's Studies

Group I

6 WSDB 290^3, 291^3
6 WSDB 390^3, 391^3, 392^3, 393^3, 394^3
6 WSDB 490^3 or 492^3, 491^3 or 493^3
3 300- or 400-level WSDB courses

Group II

6 Chosen in consultation with the Women's Studies Adviser from WSDB 370^3, 390^3, 391^3, 392^3, 393^3, 394^3, 398^{3*}, 399^{6*}, 498^{3*}, 499^{6*}; CLAS 354^3, 355^3; ECON 397^3; EDUC 321^3; ENGL 249^3, 250^3, 251^3, 252^3; FMST 329^3; FRAN 254^{3**}, 451^3, 476^3, 477^3; HIST 329^3, 331^3; PHIL 230^3; POLI 334^6; PSYC 390^6; RELI 333^3, 334^3; SOCI 372^6; THEO 270^3

**This course may be repeated twice for credit in this programme provided the subject matter is different.*
***NOTE: Les étudiant-e-s francophones ne peuvent s'inscrire à ce cours.*

30 Certificate in Women's Studies

Group I

6 WSDB 290^3, 291^3
6 WSDB 390^3, 391^3, 392^3, 393^3, 394^3
6 WSDB 490^3 or 492^3, 491^3 or 493^3
3 300- or 400-level WSDB courses

Group II

9 Chosen in consultation with the Women's Studies Adviser from WSDB 370^3, 390^3, 391^3, 392^3, 393^3, 394^3, 398^{3*}, 399^{6*}, 498^{3*}, 499^{6*}; CLAS 354^3, 355^3; ECON 397^3; EDUC 321^3; ENGL 249^3, 250^3, 251^3, 252^3; FMST 329^3; FRAN 254^{3**}, 451^3, 476^3, 477^3; HIST 329^3, 331^3; PHIL 230^3; POLI 334^6; PSYC 390^6; RELI 333^3, 334^3; SOCI 372^6; THEO 270^3

**This course may be repeated twice for credit in this programme provided the subject matter is different.*
***NOTE: Les étudiant-e-s francophones ne peuvent s'inscrire à ce cours.*

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

COURSES

NOTE: Please consult §200.1, Equivalents, for a list of equivalent courses.

WSDB 290 ***Woman's Identity and Image: Historic Attitudes*** (3 credits)
Women's Studies, because of its emerging yet rapidly developing nature, both affects and transcends pre-existing disciplines. On the one hand, this course shows, in a historical context, how by the use of new developments in various disciplines, fresh light can be shed on traditional assumptions. On the other, it studies not only the "mirror image" of women as found in certain male writings but also the images women have projected of themselves and the reasons underlying those projections. Topics may include: the witch question; the place of women in ecclesiastic reforms; the "blue stockings"; women and contraception; women and public life; women and education; women and socialism; theories of the family; the economic status of women; elitist feminism.

WSDB 291 ***Woman's Identity and Image: Recent Approaches*** (3 credits)
Again, by using new tools, culled from various disciplines, this course looks at the recent history of women; in particular, the diverse ways in which they have struggled to attain autonomy and the obstacles confronting them. Topics may include: women and revolution; women and work; theories of caste and class; changes in the status of women; women and personhood; women and their bodies; women and language; women and the national question.

WSDB 298 ***Selected Topics in Women's Studies*** (3 credits)

WSDB 299 ***Selected Topics in Women's Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

WSDB 370 ***Workshops in Special Areas of Women's Studies*** (3 credits)
Prerequisite: WSDB 290; WSDB 291. The purpose of these workshops is to examine a number of topics and problems related to the field of Women's Studies. The issues considered may differ from year to year; several workshops are offered over one academic year and students are required to select two workshops of one and a half credits each or three workshops of one credit each from the package. The workshop format is designed to allow Women's Studies students to participate in learning opportunities with flexibility in scheduling as well as to benefit from the experience of experts who visit Montréal on a short term basis. Possible topics are: Women and biotechnology, education of immigrant women, women and continuing education, women and pressure groups.

WSDB 390 ***Women and Peace: Historical and Contemporary Perspectives*** (3 credits)
Prerequisite: 30 credits, including WSDB 290 and 291 or permission of the Institute. This course examines topics related to women and peace; e.g., women's roles in social protest movements, violence, pacifism, militarism, hierarchy, revolution, inequality and ecofeminism. Various alternative proposals are examined.

WSDB 391 ***Women and Health*** (3 credits)
Prerequisite: 30 credits, including WSDB 290 and 291 or permission of the Institute. This course examines issues related to women's health. Basic concepts of anatomy and physiology, the biological events of reproduction, and issues in mental health are to be among those topics discussed. The social, health and political implications of these events are also examined.

WSDB 392 ***Les féminismes d'expression française*** (3 crédits)
Préalable: 30 crédits, y compris WSDB 290 et 291, ou autorisation de l'Institut. A partir de textes théoriques, d'ouvrages de synthèse ainsi que des oeuvres traitant de la vie quotidienne, l'on examinera les similitudes, les analogies et les traits distinctifs des luttes des femmes durant la dernière décennie ici et ailleurs dans la francophonie, notamment les luttes des femmes arabes, des Antillaises ou encore des femmes d'Afrique noire. Ce cours permettra, tout en tenant compte des différences, de mieux cerner l'expression des féminismes au sein de la francophonie.

WSDB 393 ***Les théories féministes: histoire et approches récentes*** (3 crédits)
Préalable: 30 crédits, y compris WSDB 290 et 291, ou autorisation de l'Institut. Dans ce cours, sont étudiées les différentes théories féministes. L'accent est mis sur leur développement dans le monde occidental. Les étudiant-e-s sont encouragé-e-s à utiliser une méthode à la fois synchronique et diachronique.

WSDB 394 ***Women of Ideas: History of Feminist Theory*** (3 credits)
Prerequisite: 30 credits, including WSDB 290 and 291 or permission of the Institute. This course considers the development of feminist theories focusing mainly on the eighteenth and nineteenth centuries, and concluding with an overview of some twentieth-century themes.

WSDB 398 ***Selected Topics in Women's Studies*** (3 credits)

WSDB 399 ***Selected Topics in Women's Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

WSDB 490 ***Advanced Seminar in Women's Studies*** (3 credits)
Prerequisite: 30 credits, including at least 3 credits from WSDB 390, 391, 392, 393 and 394, or permission of the Institute. This interdisciplinary seminar considers the effect of systems of gender, race and class on women's place in society. It takes into account recent developments in feminist scholarship in the Humanities and Social Sciences.

WSDB 491 ***Advanced Seminar in Women's Studies*** (3 credits)
Prerequisite: 30 credits, including at least 3 credits from WSDB 390, 391, 392, 393 and 394, or permission of the Institute. This interdisciplinary seminar explores women's visions of the future and draws on historical and contemporary materials, both creative and scientific.

WSDB 492 ***Séminaire avancé*** (3 crédits)
Préalable: 30 crédits, y compris au moins 3 crédits parmi WSDB 390, 391, 392, 393, 394, ou autorisation de l'Institut. Ce séminaire interdisciplinaire porte sur l'influence exercée par des systèmes de caste (sexe), de race et de classe sur la place des femmes dans nos sociétés. Il fait appel à l'apport féministe récent dans les sciences sociales et humaines.

WSDB 493 ***Séminaire avancé*** (3 crédits)
Préalable: 30 crédits, y compris au moins 3 crédits parmi WSDB 390, 391, 392, 393, 394, ou autorisation de l'Institut. Ce séminaire interdisciplinaire étudie le regard porté par les femmes sur l'avenir. Il fait appel à des textes de création ou à des textes scientifiques, à la fois historiques et contemporains.

WSDB 498 ***Seminar in Women's Studies*** (3 credits)

WSDB 499 ***Seminar in Women's Studies*** (6 credits)

Specific topics for these courses, and prerequisites relevant in each case, will be stated in the Undergraduate Class Schedule.

The following departmental courses are also offered as components of the programmes in Women's Studies.

Cinema
FMST 329 Women and Film (3 credits)

Classics
CLAS 354 Women in Classical Antiquity I (3 credits)
CLAS 355 Women in Classical Antiquity II (3 credits)

Economics
ECON 397 Economics of Discrimination (3 credits)

Education
EDUC 321 Sex-Role Socialization in the School (3 credits)

English
ENGL 248 Women Reading/Writing: Feminist Literary Criticism (6 credits)
ENGL 381 Women's Writing Before the Twentieth Century (3 credits)
ENGL 382 Women's Writing in the Twentieth Century (6 credits)

Français
FRAN 254 La langue et la condition des femmes au Québec (3 crédits)
FRAN 451 La littérature québécoise au féminin (3 crédits)
FRAN 476 La littérature française au féminin I (3 crédits)
FRAN 477 La littérature française au féminin II (3 crédits)

History
HIST 329 Women in Western History I (3 credits)
HIST 331 Women in Western History II (3 credits)

Philosophy
PHIL 230 Human Identity (3 credits)

Political Science
POLI 334 Women and the Law (6 credits)

Psychology
PSYC 390 Sexual Differentiation (6 credits)

Religion
RELI 333 Women and Religion I (3 credits)
RELI 334 Women and Religion II (3 credits)

Sociology
SOCI 372 Sociology of Sex Roles (6 credits)

Theological Studies
THEO 270 Women and the Christian Church (3 credits)

**With approval of the Programme Adviser.*
NOTE: Students should consult the appropriate departments concerning possible prerequisites for the above courses.

Language/Langue
Les règlements actuels permettent à tout-e étudiant-e d'écrire ses devoirs ou examens en anglais ou en français dans tous les cours offerts, à l'exception des cours de langue. La langue d'enseignement sera normalement l'anglais.
Non-francophone students may equally submit assignments in English in Français 451, 476, and 477, as long as they are taking the course for credit in Women's Studies or as an elective, and not as part of a programme of the Département d'études françaises.

SECTION 61

FACULTY OF COMMERCE AND ADMINISTRATION

61.10 COMMERCE AND ADMINISTRATION

61.20 ADMISSION REQUIREMENTS
- 61.20.1 Bachelor Degree Programmes
- 61.20.2 Core Requirements
- 61.20.3 Bachelor of Commerce Programme
- 61.20.4 Bachelor of Administration Programme
- 61.20.5 Academic Performance Regulations

61.30 GENERAL INFORMATION

61.40 ACCOUNTANCY

61.50 DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS

61.60 ECONOMICS

61.70 FINANCE

61.80 INTERNATIONAL BUSINESS

61.90 MANAGEMENT

61.100 MARKETING

61.110 TRANSPORTATION AND DISTRIBUTION MANAGEMENT

61.120 ADMINISTRATION

61.130 BUSINESS COMMUNICATIONS

61.140 BUSINESS STUDIES

61.150 COMPUTER SCIENCE

61.160 SPECIAL CERTIFICATE PROGRAMMES

61.170 SPECIAL PROGRAMMES IN ACCOUNTANCY

61.10 Commerce & Administration

Acting Dean
CHRISTOPHER A. ROSS

Associate Deans
ABDUL RAHMAN *(Academic and Administrative Affairs)*
ROLAND O. WILLS *(Academic and Student Affairs - Undergraduate Programmes)*
BRUCE ENGLISH *(Academic and Student Affairs—Loyola Campus)*
JUAN J. SEGOVIA *(Research and PhD Programme)*

61.20 Admission Requirements

General admission requirements are listed in §13.

Specific requirements for admission to the Faculty of Commerce & Administration for students in CEGEP are Mathematics 103, 105, 203, or equivalent. Arrangements will be made in the first-year programme to give special instruction to those students who lack adequate mathematical preparation.

Individuals accepted under the provisions of the **extended credit programme** will be required to complete the following additional 30 credits within their first year:

MATH 208	3 credits
MATH 209	3 credits
MATH 211	3 credits
ENGL 205, 206 or 212, 213, or an appropriate alternative	6 credits
*electives	15 credits
TOTAL	30 credits

**These electives must be selected from outside the offerings of the Faculty of Commerce and Administration, but not from disciplines represented in its degree programmes.*

NOTE: Because of the extensive use of computers in various programmes, students are strongly advised to have access to a personal computer.

61.20.1 BACHELOR DEGREE PROGRAMMES

The Faculty of Commerce and Administration offers two distinct Bachelor programmes. The *Bachelor of Commerce (BComm)* degree is the more structured "professional" type programme in which the student will select a Major from those offered in Commerce or Economics. The *Bachelor of Administration (BAdmin)* degree is a less structured "liberal" type programme which permits the student to pursue interests outside the Faculty, and offers the possibility of complementing a fundamental grounding in Administration with minor concentrations in an area of interest. Degree requirements listed below apply to all students entering the programme on or after June 1, 1991.

61.20.2 CORE REQUIREMENTS

The required 51-credit core is identical for both programmes and comprises the following courses:

1st Year
ACCOUNTANCY 213
DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 243
ECONOMICS 201
MANAGEMENT 266
MARKETING 213
ACCOUNTANCY 218
DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 244
ECONOMICS 203
DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 222
FINANCE 214

2nd Year
BUSINESS COMMUNICATIONS 300
MANAGEMENT 340
DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 250
MARKETING 350
MANAGEMENT 475
FINANCE 315

3rd Year
MANAGEMENT 460

NOTE: Students are responsible for following the correct sequence of courses required for the completion of a particular programme.

61.20.3 BACHELOR OF COMMERCE PROGRAMME

This programme provides the student with an education for business life. It is our intention to graduate students liberally educated about business. To accomplish this, we have designed a multi-disciplinary and interdisciplinary curriculum which is intellectually challenging.

The first year of the programme is intended to provide an informative accumulation of operational attitudes, skills, and tools which form the base for the core concentration.

The core concentration in the second year attempts to give broad experience in all phases of business in a coordinated, analytical, and reflective period of study. All the resources of the

student's intellectual ability are combined with his or her interdisciplinary studies to analyze, formulate, judge, and solve challenging business situations.

The last year of the programme is intended to provide students with an opportunity to immerse themselves in an area of specialized study. In addition, students participate in a course which is designed to test their ability to integrate their knowledge and to view the study of business as a whole.

In view of this design, all students must follow the sequence of the courses on the basis of an academic year as outlined in the curriculum. No student will be permitted to register for second- or third-year courses without having completed the courses of the first academic year.

Exceptions may be authorized in writing for valid reasons by the Dean or Academic Adviser.

Degree Requirements

To obtain the degree of Bachelor of Commerce, all students are required to follow a Major Programme. A Major consists of at least 24 credits in the chosen discipline in addition to the required 51-credit core. The remaining credits are unrestricted electives and may be selected to form a Minor programme if applicable. Major and Minor programmes are available in the following areas:

NOTE: There are no double majors or double minors in the Faculty of Commerce and Administration.

The Faculty may impose quotas on some majors.

NOTE: Students registered in the 90-credit programme in the Faculty of Commerce and Administration may take ESL courses for degree credit, up to a maximum of six (6) credits.

CONCORDIA FACULTY OF COMMERCE AND ADMINISTRATION

* **Bachelor of Commerce**	*Major*	*Minor*	*Certificate*
Accountancy	X	X	
Business Studies		X[1]	X[1]
** Economics	X		
Finance	X	X	
International Business	X	X	
Management			
Administrative Management	X	X	
Human Resource Management	X		
Personnel Management		X	
Entrepreneurship & Small Business Management		X	
Managerial Law		X	
Industrial Relations	X		
Marketing	X	X	
Marketing Research		X[1]	X[1]
Decision Sciences and Management Information Systems			
Decision Sciences:			
Production/Operations Management Option	X	X	
Operations Research Option	X	X	
Business Statistics Option	X	X	
Management Information Systems	X	X	
Transportation and Distribution Management		X	

Students will indicate their preferred field of concentration at the time of application for entry. It should be noted, however, that since the programme of study of the first year is common to all programmes, students may change to another programme provided, of course, that the capacity of the programme permits it.

[1]*This programme is not open to students registered in a programme leading to the degrees of Bachelor of Commerce or Bachelor of Administration.*

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Students of this Faculty who elect to major in any of the disciplines of the Faculty or Economics will be enrolled in a Bachelor of Commerce degree programme.

* **Bachelor of Administration**	*Specialization*
General Administration (60 credits)	X

30 credits must be selected from courses outside the Faculty of Commerce and Administration, but at least 15 credits must be beyond the introductory level.

**Both degrees have a common core of 51 credits out of a total of 90 credits.*

***Students may follow an Honours in Economics, but they must obtain approval from the Arts and Science Faculty (Department of Economics).*

61.20.4 BACHELOR OF ADMINISTRATION PROGRAMME

The Bachelor of Administration Programme is designed to develop problem-solvers and decision-makers in all walks of life.

A successful graduate is able to develop objectives and strategies, organize people and resources, direct an organization's activities and control these activities, and appraise objectives and strategies in the light of results.

The programme has been made flexible enough to allow students to develop according to their own needs.

This programme provides students with a fundamental grounding in administration and offers the opportunity to pursue varied interests among courses offered by the University.

Degree Requirements

To obtain the degree of Bachelor of Administration, students are required to complete the 51-credit core and 9 elected credits from Commerce and/or Economics to complete the 60 credits required for Specialization. The remaining 30 credits must be selected from courses outside the Faculty of Commerce and Administration, but at least half of these must be beyond the introductory level.

Students wishing to complete a minor in the Faculty of Commerce and Administration may do so provided they meet all other requirements of the programme.

61.20.5 ACADEMIC PERFORMANCE REGULATIONS

NOTE: The GPA regulations apply to all students, including those with Visiting Status, registered in programmes offered by the Faculty of Commerce and Administration. This also includes the Minor in Business Studies and Certificate programmes.

Objectives

The objectives of these regulations are:

a) to ensure that the Faculty can certify that all of its graduates are qualified to enter their profession,

b) to ensure that students can, with the assistance or intervention of the Faculty, assess themselves objectively, and plan programmes of study designed to meet their individual needs.

Annual Weighted Grade Point Average (WGPA)* Requirements and Consequences

*See §16.3.7, II for definition of Annual WGPA.

Acceptable Standing requires that a student obtain an Annual WGPA of at least 2.00.

NOTE: Although a C- grade (1.70 grade points) is designated as Satisfactory in §16.3.2, a WGPA of 2.00 is required for Acceptable Standing.

Students in Acceptable Standing may proceed subject to the following conditions: any failed grade must be cleared by repeating the failed course or in the case of an elective, by replacing the failed course by an alternative within the same group of electives. Any variation must be approved by the Dean's Office.

Conditional Standing results when a student obtains an Annual WGPA of less than 2.00, but at least 1.50. A student is not permitted to obtain two consecutive Conditional Standing assessments.

Students in Conditional Standing may not write supplemental examinations nor complete work graded incomplete but may proceed subject to the following conditions:

a) They must receive academic counselling from the appropriate member of the Dean's Office.

b) They must repeat successfully all courses in which failing grades were obtained, or replace them by alternatives approved by the Dean's Office in consultation with the student's department.

c) In no case will the number of credits exceed fifteen per term for full-time students and six per term for part-time students.

d) They must obtain Acceptable Standing at the time of their next assessment.

Failed Standing results when a student obtains an Annual WGPA of less than 1.50, or Conditional Standing in two consecutive periods of assessment.

Failed students may not write supplemental examinations nor complete work graded incomplete.

Students who are in Failed Standing for a second time must withdraw from the University and may not apply for readmission.

Failed students who are not required to withdraw may apply for readmission through the Dean's Office. If readmitted, they will be placed on academic probation. They must return to Acceptable Standing at the time of their next assessment. Other conditions will be determined at the time of readmission.

Graduation Requirements

Students must satisfy all course requirements and be in Acceptable Standing.

The standings of potential graduates who have attempted less than twelve (12) credits since their last assessment are determined on the basis that these credits constitute an extension of the last assessment period.

Students who fail to meet Acceptable Standing but meet Conditional Standing will have the following options:

a) Register for twelve credits and meet the criteria for Acceptable Standing.

b) Register for fewer than twelve credits. In this case standing will be determined on the basis that these constitute an extension of the last assessment period.

In both case a) and b), courses taken must be approved by the appropriate member of the Dean's Office in consultation with the student's department where necessary. Normally, these courses will be selected from the offerings of the Faculty of Commerce and Administration or Department of Economics.

Dean's Office

Dean's Office is to be understood as being the appropriate member of the Dean's Office, normally the Associate Dean, Student Affairs, or delegate.

Old Credit Programme (Transition)
Students who have enrolled in a programme at this Faculty prior to June 1, 1976 will complete the programme as shown in the University Announcement 1975/1976. For substitution of courses not offered in the new programme, students will consult with representatives of the respective departments.

Failures
Students are cautioned that a failure in a first-term course will prohibit them from proceeding to a second-term course for which the first is a prerequisite. Students who find themselves in this position must drop the second-term course and register in a section of the failed course, if available.
There will be a course-change period at the beginning of the second term, at which time students failing in the above category must make arrangements with the Office of the Registrar for the necessary course changes.

NOTE: THERE ARE NO SUPPLEMENTAL EXAMINATIONS IN THE FACULTY OF COMMERCE AND ADMINISTRATION.

French Language
The business community, as well as governments, now express a preference for university graduates who are bilingual. We, therefore, advise all students to take advantage of the opportunities available during their years at this University to ensure that they are bilingual when they present themselves for employment upon graduation.

Courses/Non Commerce Students
Students not enrolled in the Faculty of Commerce and Administration Programme may register for six (6) credits per term for a maximum of thirty (30) credits (total) within the Faculty of Commerce and Administration.
Students not registered in the Faculty of Commerce & Administration, who wish to undertake any courses offered by the Faculty, but do not have the stated prerequisites, must obtain permission in writing from the Student Request Committee, Faculty of Commerce *prior to registration.*

61.40 Accountancy

Professor and Chair of the Department
FARHAD SIMYAR

Professors
C. DEREK ACLAND
ROBERT A. LONG

Associate Professors
G. ROBERT CURNEW
HENRY J. DAUDERIS
KELLY GHEYARA
MOHAMED E. IBRAHIM
M. RAI KAPOOR
DAVID F. MacDONALD
E. BRIAN MARKLAND
HOWARD B. RIPSTEIN
FRANK L. SBROCCHI
JUAN J. SEGOVIA

Assistant Professors
IBRAHIM M. ALY
ROGER COLLINS
CHARLES DRAIMIN
GEORGE K. KANAAN
JEONG B. KIM
BRUCE A. LAROCHELLE
GEORGE LOWENFELD

Lecturers
GAIL FAYERMAN
EMILIO IMBRIGLIO
SANDRA ROBINSON
ALEX VASIL

Sessional Lecturers
HAMDI F. ALI
GERMAINE CHAN
NIM FAN
PAUL FAULKNER
AMJAD MOINUDDIN
HARRY NOZETZ
WENDY ROSCOE
ELEANOR WERBIN
KAREN ZAJDMAN
FRED ZWIRZ

Visiting Associate Professor
CIDGEM SOLAS

Executive-in-Residence
MARC J. STERN

30 Major in Accountancy

3	ACCO 303
3	ACCO 323
3	ACCO 326
3	ACCO 335
3	ACCO 429
3	ACCO 441
3	ACCO 461
9	additional credits offered by the Department

12 Minor in Accountancy

3	ACCO 323
3	ACCO 326
6	additional credits offered by the Department

ACCO 213 ***Introductory Financial Accounting*** (3 credits)
This course examines the theory and practice involved in recording and reporting an organization's financial information. Concepts of asset valuation and income measurement are discussed with respect to both large and small enterprises. Professional and legal requirements concerning financial statement disclosure are introduced and the needs of decision makers requiring financial information are considered. *NOTE A/See §200.2*

ACCO 217 ***Financial and Managerial*** (3 credits)
Prerequisite: ACCO 213. This course is designed to develop, through verbal analysis of business cases, an understanding and skill in the preparation of statements for financial accounting purposes, taking into account the needs of business management. The student must be able to analyze these statements and comment critically thereon. *NOTE A/See §200.2*
NOTE: Major and Honours students in Accountancy may not take this course for credit.

ACCO 218 ***Introductory Managerial Accounting*** (3 credits)
Prerequisite: ACCO 213. This course examines the development of accounting information for the purposes of planning, control, decision making, and, in general, for the more efficient operation of enterprises, large and small. *NOTE A/See §200.2*

ACCO 220 ***An Accounting Approach to Management*** (3 credits)
This course is designed to cover certain major aspects of management related to the accounting process. These include: business organization; accounting concepts; financial statement analysis; management uses of accounting information; and the effect of taxation on business decisions. *NOTE A/See §200.2*
NOTE: Commerce and Administration students may not take this course for credit.

ACCO 221 ***Accounting and Management*** (3 credits)
Prerequisite: ACCO 220. This course is sequential to ACCO 220, and examines in greater depth the areas covered in that course. *NOTE A/See §200.2*
NOTE: Commerce and Administration students may not take this course for credit.

ACCO 303 ***Cost and Management Accounting*** (3 credits)
Prerequisite: ACCO 218. In this course a detailed examination is made of the various techniques, systems, and procedures applicable to the managerial use of accounting information for decision-making, profit-planning, and control. *NOTE A/See §200.2*

ACCO 323 ***Intermediate Accounting I*** (3 credits)
Prerequisite: ACCO 213. This course extends the material covered in the earlier financial accounting course, integrating the previous work with more advanced theory and application. Intensive study is made of the theory and practice of external reporting by commercial entities. Concepts and procedures involved in the valuation of resources are studied, as are the concepts of income determination. *NOTE A/See §200.2*

ACCO 326 ***Intermediate Accounting II*** (3 credits)
Prerequisite: ACCO 323. This course continues the intensive study of Intermediate Accounting I, with particular emphasis on accounting for liabilities, shareholders' equity and other related areas such as earnings per share, pension accounting and accounting for income tax.

ACCO 335 ***Advanced Accounting*** (3 credits)
Prerequisite: ACCO 326. This advanced course is concerned primarily with intercorporate investments and combinations. A study is also made of other accounting areas including foreign currency translation. *NOTE A/See §200.2*

ACCO 407 ***Accounting Practice and Policy*** (3 credits)
Prerequisite: ACCO 335, ACCO 429. Areas previously or concurrently covered in the field of corporate financial reporting are extended, and current accounting literature and pronouncements of professional accounting bodies are examined. Extensive use is made of the case method of instruction. *NOTE A/See §200.2*
NOTE: This course will be offered in the second term only.

ACCO 410 ***Specialized Accounting*** (3 credits)
Prerequisite: ACCO 326. In this course an examination is made of specialized aspects of accounting for not-for-profit organizations such as municipal governments, colleges, and hospitals. The course focuses on both the financial and managerial applications of accounting principles and theory.

ACCO 414 ***Accounting Information Systems*** (3 credits)
Prerequisite: ACCO 218. This course examines the systems for collecting and processing information necessary in planning, decision making and the control of business organizations. Theory and practice are combined in a case-study approach which includes "hands-on" computer experience with spreadsheet and database programmes. *NOTE A/See §200.2*
NOTE: Introductory-level knowledge of computer systems is recommended.

ACCO 422 ***Cost and Management Accounting*** (3 credits)
Prerequisite: ACCO 303. This course continues at an advanced level the study of modern cost and managerial systems using cases, readings and problems. Coverage includes a critical evaluation of accounting control systems, related quantitative business controls and conceptual and measurement problems in evaluating performance. *NOTE A/See §200.2*

ACCO 429 ***Auditing Concepts*** (3 credits)
Prerequisite: ACCO 323. This course introduces auditing theory and its application by external and internal auditors in fulfilling their respective objectives and responsibilities. The focus is on the audit function and the role and purpose of different types of auditors. Fundamental concepts in auditing are discussed in terms of current practices and standards. *NOTE A/See §200.2*

ACCO 432 ***Financial Auditing*** (3 credits)
Prerequisite: ACCO 326, 429. This course emphasizes the role of the public accountant in expressing an opinion on the financial statements of an organization. The use of audit standards, procedures, and internal control is related to the expression of an auditor's opinion. Cases and problems solving form the basis of student involvement in this course. *NOTE A/See §200.2*

ACCO 433 ***Auditing and Investigation*** (3 credits)
Prerequisite: ACCO 429. This course deals with questions related to professional accounting practices and also covers different types of management services that auditors are frequently requested to undertake. *NOTE A/See §200.2*

ACCO 441 ***Taxation I*** (3 credits)
Prerequisite: ACCO 213. This course examines the federal taxation structure, including the taxation of employment, business and property income and capital gains. While emphasizing the income taxes levied on individuals, the course also examines the taxation of corporations. *NOTE A/See §200.2*

ACCO 442 ***Taxation II*** (3 credits)
Prerequisite: ACCO 441. This course extends the coverage of ACCO 441 with an examination of specialized topics in personal and corporate income tax, including a detailed review of the taxation of corporations, and tax planning including the tax effects of various theoretical and practical business combinations. *NOTE A/See §200.2*

ACCO 451 ***Computer Auditing*** (3 credits)
Prerequisite: COMP211 or equivalent, and ACCO 429. This course explores the impact of large scale computer use on auditors and their examination of a company's records and systems of internal control. The emphasis is on helping auditors understand when a computer can be used to assist them and how to follow through with its use. Topics covered include the different controls and techniques required in a computer system, the audit trail, approaches to computer auditing and computer application for auditing, computer and software security, and consideration of the various computerized audit packages available. *NOTE A/See §200.2*

ACCO 461 ***Accounting Theory I*** (3 credits)
Prerequisite: ACCO 335. This course examines the framework underlying current accounting thinking and procedures. A study is made of the development and the influence of professional accounting organizations and regulatory bodies on accounting theory. Controversial areas are emphasized. *NOTE A/See §200.2*

ACCO 462 ***Accounting Theory II*** (3 credits)
Prerequisite: ACCO 461. This course extends the coverage of ACCO 461. Particular emphasis is placed on developments in the current literature and in problem areas facing the accounting profession.

ACCO 468 ***(also listed as IBUS 470) International Accounting*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; ACCO 218; FINA 315.
This course examines accounting practices employed by different countries; accounting and financial control of international operations, and various consolidation procedures and their effect on the interpretation of financial statements are discussed.
NOTE: This course will be offered in the second term only.
NOTE: Students who have received credit for IBUS 470 may not take this course for credit.

ACCO 470 ***Special Topics in Accounting*** (3 credits)
Prerequisite: Written permission of the Department. Intended to complement and supplement accounting courses taken previously or concurrently at the senior level, this course emphasizes accounting literature and modern thought. Students are encouraged to work independently on research topics of interest to them. Enrolment is restricted and is subject to departmental approval. *NOTE A/See §200.2*
NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

ACCO 471 ***Accounting Seminar*** (3 credits)
Prerequisite: ACCO 470. This course examines in greater depth areas of individual interest. Enrolment is restricted and is subject to departmental approval. Students repeating ACCO 471 register for credits under ACCO 472. *NOTE A/See §200.2*
NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

61.50 Decision Sciences and Management Information Systems

Associate Professor and Chair of the Department
THOMAS JEROME TOMBERLIN

Professor
SURESH KUMAR GOYAL

Associate Professors
CLARENCE BAYNE
JEAN-MARIE BOURJOLLY
DALE DOREEN
DENNIS KIRA
MARTIN KUSY
TAK KWAN MAK
THEMIS POLITOF
AHMET SATIR
PETER WADE
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Assistant Professors
MERAL BÜYÜKKURT
JAMSHID ETEZADI-AMOLI
ALI FARHOOMAND
MOHAMED KHALIFA
DANIELLE MORIN
FASSIL NEBEBE

Lecturers
BORIS BARAN
MAHESH SHARMA

Sessional Lecturers
PATRICK BEYROUTI
CORY BOON
STEVE KEPEKCI
GERALDINE KORDA
KEN MACKENZIE
GARY TICOLL

NOTE: The "QUAN" designation has been changed to "DESC". This is a department name change only (formerly Quantitative Methods).

A student in any Major or Minor Programme in Decision Sciences and Management Information Systems is required to take DESC 222 in addition to the courses which are listed for the Programme.

Students majoring in Decision Sciences and Management Information Systems are strongly recommended to take DESC 250 at the earliest opportunity in their programme.

An option in Information Systems is offered by the Department of Computer Science. Details are available in the Engineering and Computer Science section (§71.80) of the Undergraduate Calendar.

The Department of Decision Sciences and Management Information Systems offers two Majors — a Major in Decision Sciences with three Options and a Major in Management Information Systems. Within these two Majors there is a listing of Common Courses totalling twelve (12) credits. These must be taken by all students majoring in Decision Sciences or Management Information Systems. They are as follows:

12 Common Courses
3 DESC 350
3 DESC 378
3 DESC 381
3 DESC 382

27 Major in Decision Sciences Production/Operations Management Option
12 DESC 350, 378, 381, 382
12 DESC 355, 451, 452, 492
3 DESC 361, 362, 462, 466, 477, 490, MANA 345

12 Minor in Production/Operations Management
9 DESC 350, 355, 451
3 DESC 452, 490, 492

27 Major in Decision Sciences Operations Research Option
12 DESC 350, 378, 381, 382
9 DESC 361, 362, 492
6 DESC 451, 462, 464, 466, 477, 490

12 Minor in Operations Research
9 DESC 350, 361, 362
3 DESC 462, 464, 466, 490, 492

27 Major in Decision Sciences Business Statistics Option
12 DESC 350, 378, 381, 382
6 DESC 375, 477
3 DESC 371, 478
6 DESC 361, 362, 371, 451, 464, 478, 481, 482, 483, 486, 490, 492, MATH 351, 454

12 Minor in Business Statistics
9 DESC 375, 378, 477
3 DESC 371, 478

27 Major in Management Information Systems
12 DESC 350, 378, 381, 382
3 COMP 251
9 DESC 481, 482, 483
3 DESC 383, 485, 486, 492, 493

12 Minor in Management Information Systems
6 DESC 381, 382
6 DESC 481, 482, 483, 485, 486, 493

DESC 222 ***Introduction to Management Information Systems*** (3 credits)
Prerequisite: ACCO 213; MANA 266 previously or concurrently. The objective of this course is to introduce students to the principles of management information systems. Topics include hardware and software of various information technologies, information requirement analysis, systems design, different types of computer-based information systems, implementation of information systems, data management and end-use computing. Moreover, students acquire skills necessary for solving small information-processing problems encountered in functional areas of business.
NOTE: Students who have received credit for DESC 221 (QUAN 221) may not take this course for credit.

DESC 243 ***Introduction to Business Statistics and Decision Models*** (3 credits)
Prerequisite: MATH 208; MATH 209 previously or concurrently. (Students admitted from CEGEP with the 10.12 profile are eligible for direct entry into DESC 243.) The aim of this course is to introduce students to the fundamentals of probability and statistics as applied in the various areas of business and administration. Topics covered include univariate descriptive measures, probability theory (decision trees, conditional probability, Bayes theorem), probability distributions (binomial, Poisson, normal and exponential), bivariate data and probability (scatter plots, covariance, correlation), sampling distribution, estimation and model-based simple regression. Students use statistical software packages on mainframe and/or microcomputers to solve applied problems. *NOTE See §200.7*

DESC 244 ***Introduction to Statistical Analysis for Business and Administration*** (3 credits)
Prerequisite: DESC 243 or equivalent. This course introduces students to basic statistical methods in the context of applied data analysis in business and administration. Topics covered include hypothesis testing, analysis of variance, applications of chi-square statistic, nonparametric methods, quality control, regression and correlation analysis, time series analysis and forecasting techniques. Students use statistical software packages on mainframe and/or microcomputers to solve applied problems. *NOTE See §200.7*

DESC 250 ***Introduction to Production/Operations Management*** (3 credits)
Prerequisite: MATH 211; DESC 243 previously or concurrently. (Students admitted from CEGEP with the 10.12 profile are exempt from MATH 211.) The objective of this course is to introduce students to analytical decision making in the production/operations management context. The functional aspects of operations and the relationship of production/operations management to the other business functions are emphasized throughout the course. Linear programming, sensitivity analysis, operations capacity and facility location, facility layout, inventory models and project management are the subject areas emphasized to aid in making process and capacity decisions for both the manufacturing and service industries.
NOTE: Students who have received credit for DESC 313, 314 or 315 (QUAN 313, 314 or 315) may not take this course for credit.

DESC 313* ***Managerial Operations Research*** (3 credits)
Prerequisite: DESC 244; MATH 211. (Students admitted from CEGEP with the 10.12 profile are exempt from MATH 211.) This course is an introduction to operations research and its applications to the functional areas of administration. The basic model covered is linear programming. Formulations, graphical and algebraic solutions, sensitivity analyses and the use of a computer package for solving large-scale problems are studied. The related transportation, assignment and integer programming problems are also discussed.
**This course will eventually be phased out of the course offerings and may not be taken for credit by students admitted to the University on or after June 1, 1986.*

DESC 314* ***Operations Research and Production Systems*** (3 credits)
Prerequisite: DESC 313. This course surveys several operations research and production models and their applications. The basic areas covered are: project management, decision theory, inventory and production models, simulation, waiting-line models, dynamic programming, and Markov processes. The tools of probability analysis are used.
**This course will eventually be phased out of the course offerings and may not be taken for credit by students admitted to the University on or after June 1, 1986.*

DESC 350 ***Production/Operations Systems*** (3 credits)
Prerequisite: DESC 313 or DESC 315* or 250**. This course deals with various modelling aspects of production/operations systems. Among the subjects covered are productivity issues, aggregate planning and operations scheduling and control techniques. Modelling techniques used in this respect are dealt with within the context of integer and goal programming and waiting line models. Case studies are discussed to highlight the decision support aspects of production/operations systems.
**For students admitted to the University effective June 1, 1986.*
***For student admitted to the University effective June 1, 1989.*
NOTE: Students who have received credit for DESC 365 may not take this course for credit.

DESC 355 ***Operations Logistics*** (3 credits)
Prerequisite: DESC 313 or DESC 315* or DESC 250**. This course develops concepts and understanding about planning and control of movement and storage activities of materials in business organizations. In this respect, various operational aspects of facility location, distribution systems, materials handling, warehouse operations, maintenance planning, reliability and quality control are covered.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*

DESC 361 ***Linear Optimization*** (3 credits)
Prerequisite: DESC 313 or DESC 315* or DESC 250**. This course deals with advanced topics in linear optimization and implementation aspects of problem solving in a business environment. Elements of linear modelling process and primal simplex algorithm are reviewed. Functional areas where linear optimization may be applied are discussed. Among the advanced topics covered are revised simplex algorithm, duality, dual simplex algorithm, parametric linear programming, the transportation problem, integer and goal programming. Case studies are discussed to highlight the implementation aspects.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*
NOTE: Students who have received credit for DESC 316 may not take this course for credit.

DESC 362 ***Discrete Models in Business I*** (3 credits)
Prerequisite: DESC 313 or DESC 315* or DESC 250**. This course introduces the student to the decision-making process through the use of discrete models having application to problems such as planning, distribution, scheduling, location and resource allocation. Topics include the application of tree algorithms, path algorithms, network flow algorithms, and dynamic programming to modelling in a business environment.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*
NOTE: Students who have received credit for DESC 412 may not take this course for credit.

DESC 371 ***Business Decision Analysis*** (3 credits)
Prerequisite: DESC 244 or equivalent. This course introduces students to the basic ideas of decision analysis. Topics covered include elementary decision modelling, probability assessment, utility estimation, multiattribute problems, and complex decision problems.
NOTE: Students who have received credit for DESC 345 may not take this course for credit.

DESC 375 ***Business Sampling Techniques*** (3 credits)
Prerequisite: DESC 243 or equivalent. This course deals with the design, execution and analysis of sample surveys, including the necessary theory to carry out these tasks properly in the different areas of business and administration. Topics include simple random, stratified, cluster, two-stage, ratio and regression estimates, systematic sampling, and some aspects of survey design and management. Students, either individually or in small groups, are required to carry out or critique a survey. Ability in the use of statistical software packages on mainframe and/or microcomputers is desirable.
NOTE: Students who have received credit for DESC 448 may not take this course for credit.

DESC 378 ***Business Applications of Statistical Models*** (3 credits)
Prerequisite: DESC 244 or equivalent; DESC 222 or equivalent. This course is intended to give the student a strong foundation in data analysis using linear models, with emphasis on applications in business, administration and economics. Topics include linear regression on one, two and several explanatory variables, model-building techniques and forecasting models, analysis of variance and covariance and elements of experimental design. Students, either individually or in small groups, are required to carry out a project. This is an applied course with a heavy emphasis on actual data analysis using statistical software packages on mainframe and/or microcomputers.
NOTE: Students who have received credit for DESC 444 may not take this course for credit.

DESC 381 ***Personal Computing in Business*** (3 credits)
Prerequisite: DESC 222. This course has two objectives. First, students are exposed to common information processing problems in the functional areas of business. Second, they learn how to use personal computers to solve these problems. In the process, students are introduced to a programming language, such as BASIC, and selected application development packages.
NOTE: Students who have received credit for DESC 323 may not take this course for credit.

DESC 382 ***Business Data Management*** (3 credits)
Prerequisite: DESC 222. This course introduces students to the management of data in a corporate environment. Topics include data management, elementary data modelling, physical structures for representing business data, file organization, data dictionaries, file design, database administration, and issues in documentation. Use is made where feasible of professional data management software to illustrate course concepts.
NOTE: MIS Majors are strongly recommended to take COMP 251 either prior to or at the same time as this course.
NOTE: Students who have received credit for DESC 327 may not take this course for credit.

DESC 383 ***Application Software Development*** (3 credits)
Prerequisite: DESC 222, COMP 251. This course is divided into two parts: First, conventional methodologies utilized in the development of business application software is examined using the COBOL programming language. Topics of study include structured design, structured programming, and the management of software development. Second, the impact of new trends in the area, such as fourth-generation languages, end-user computing, and prototyping, on the traditional life-cycle development is examined.
NOTE: Students who have received credit for DESC 423 may not take this course for credit.

DESC 451 ***Inventory Management*** (3 credits)
Prerequisite: DESC 313 or 315* or DESC 250**. This course covers deterministic and stochastic inventory models. Dependent demand systems and in-process inventory models are dealt with. New trends in inventory control are discussed. The fundamental forecasting techniques are also reviewed.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*
NOTE: Students who have received credit for DESC 416 may not take this course for credit.

DESC 452 ***Computer Integrated Production/Operations Management*** (3 credits)
Prerequisite: DESC 350, DESC 355 or DESC 451. This course studies the recent developments and trends in manufacturing and information technologies and the impact of these on the planning and control aspects of production/operations management. Case studies are used to illustrate the implementation aspects of the subjects covered.

DESC 462 ***Discrete Models in Business II*** (3 credits)
Prerequisite: DESC 362, or permission of the Department. This course introduces students to further discrete models with an emphasis on integer programming modelling and solution techniques. Topics covered are matching and covering algorithms, the Chinese postman and the travelling salesman problems, routing heuristics and location models. Case studies are used to illustrate the modelling and the implementation aspects of the subjects covered.

DESC 464 ***Non-Linear Programming*** (3 credits)
Prerequisite: DESC 361 or equivalent. This course introduces some fundamental concepts in non-linear optimization. The topics covered include convexity, formulation of non-linear problems, identification of optimal points, unconstrained and constrained optimization techniques. Emphasis throughout the course is placed on business-related problems.
NOTE: Students who have received credit for DESC 415 may not take this course for credit.

DESC 466 ***Decision Models in Service Sector*** (3 credits)
Prerequisite: DESC 350. The course surveys applications of decision models in the service sector. Efficiency and effectiveness issues in the service sector such as police deployment, municipal resource allocation, health care and criminal justice models are covered. Case studies from Canada and other countries are discussed using operations research, operations management and statistical techniques.
NOTE: Students who have received credit for DESC 414 may not take this course for credit.

DESC 477 ***Statistical Forecasting*** (3 credits)
Prerequisite: DESC 244 or equivalent; DESC 222 or equivalent. This course presents the foundations of applied time-series analysis for managerial forecasting. It includes forecasting methods and objectives, fundamental concepts in time-series analysis, models for seasonal time-series, model for nonstationary time-series, Box and Jenkins methods, forecast evaluation. This is an applied course with a heavy emphasis on actual data analysis using statistical computer packages on mainframe and/or micro-computers.
NOTE: Students who have received credit for DESC 447 may not take this course for credit.

DESC 478 ***Business Applications of Multivariate Data Analysis*** (3 credits)
Prerequisite: DESC 244 or equivalent. This course deals with analysis of data consisting of measurements of several variables on a sample of individuals. The emphasis is on the methods of multivariate statistical techniques as applied to research in business and administration. Topics include simultaneous regression models, multivariate analysis of variance, discriminant analysis, principal components, factor analysis, clustering and canonical correlations. Substantial use is made of statistical software packages on mainframe and/or microcomputers.

DESC 481 ***Information Systems Analysis*** (3 credits)
Prerequisite: DESC 381, DESC 382. (Computer Science students may take this course without the stipulated prerequisites, but with the permission of the DS & MIS Department.) This course covers the first phase of the systems development life cycle, which culminates in the systems proposal. Topics include the preliminary survey, analysis of existing systems and identification of deficiencies, the development of functional specifications, feasibility and cost/benefit analysis and development of a recommended course of action. In addition, various diagramming techniques are examined.
NOTE: Students who have received credit for DESC 424 may not take this course for credit.

DESC 482 ***Information Systems Design*** (3 credits)
Prerequisite: DESC 381, DESC 382, DESC 481. Methods and procedures for designing business information systems are discussed. Topics include data and process modelling, preparing screen and report layouts using data dictionaries and documentation within the design process. A comprehensive case study using current computer-aided technologies demonstrates various design concepts.
NOTE: To ensure proper succession in the thought process, students are strongly recommended to enroll in this course in the term immediately following the successful completion of DESC 481.
NOTE: Students who have received credit for DESC 425 may not take this course for credit.

DESC 483 ***Management of Information Systems*** (3 credits)
Prerequisite: DESC 381, DESC 382. (Computer Science students may take this course without the stipulated prerequisites, but with the permission of the DS & MIS Department.) This course explores

various topics related to management of information resources and services in the organization. First, the basic principles of information systems management are introduced. Topics include planning, control, development, and operations of information technology. Through the examination of several case studies, students are given the opportunity to acquire the necessary skills to identify, analyze, and communicate different issues surrounding these topics.
NOTE: Students who have received credit for DESC 422 may not take this course for credit.

DESC 485 ***RPGII Programming*** (3 credits)
Prerequisite: DESC 381, DESC 382, COMP 251. RPG is a programme generator-type language intended for use in business applications. Working in an IBM environment, students deal with typical data processing problems, including multiple-level control-break reports, table processing, sequential and indexed file updating. Various elements of the RPG III programming language are examined.
NOTE: Students who have received credit for DESC 421 may not take this course for credit.

DESC 486 ***Office Information Systems and Telecommunications*** (3 credits)
Prerequisite: DESC 381, DESC 382. This course covers two distinct but interrelated areas of information technology. First, students are exposed to various organizational issues surrounding office information systems. Specifically, students learn how to evaluate, implement, and support these systems to enhance office productivity. In the second part of the course, students are introduced to the principles of telecommunications in the corporate environment. Emphasis is placed on the effective management of these systems.
NOTE: Students who have received credit for DESC 427 may not take this course for credit.

DESC 490 ***Special Topics in Decision Sciences and Management Information Systems*** (3 credits)
Prerequisite: Permission of the Department. This course allows for more intensive examination of one or more topics in production/operations management, operations research, business statistics or management information systems.

DESC 492 ***Business Systems Simulation*** (3 credits)
Prerequisite: DESC 250; DESC 381 or permission of the Department. Computer simulations of deterministic and stochastic systems are studied, using procedural languages such as FORTRAN and BASIC, as well as special simulation-oriented languages. Topics include the collection and preliminary analysis of input data, verification, validation, design of model experiments and the analysis and presentation of the results. Students study and simulate a real-life situation.
NOTE: Students who have received credit for DESC 426 may not take this course for credit.

DESC 493 ***Decision Support and Expert Systems*** (3 credits)
Prerequisite: DESC 350; DESC 378; DESC 381; DESC 382. New developments in information technology such as data bases, fourth-generation languages, and artificial intelligence have changed the nature of traditional business decision support systems (DSS). This course starts by examining the human decision-making process and categories of decision tasks. It then evaluates the requirements for an effective user-machine interface. The impact of the new end-user computing tools is considered in relation to DSS design. Finally, the principles of business expert systems are explained, with examples of potential areas for application.
NOTE: Students who have received credit for DESC 417 may not take this course for credit.

61.60 Economics

Bachelor of Commerce students who wish to follow an Honours or Major programme in Economics may meet the requirements of the Faculties of Commerce and of Arts and Science by following the programmes described below. The course descriptions for Economics courses may be found in §31.080.

Students seeking admission into the Honours programme require approval of the Department, following a recommendation from its Honours Committee.

Bachelor of Commerce students wishing to take a Minor in Economics may do so by selecting 30 credits in Economics in consultation with the Economics Department.

90 BComm Honours in Economics

Year I

6 ECON 201*, 203*
6 DESC 243, 244[1]
6 MARK 213, FINA 214**
6 ACCO 213, 218
6 MANA 266, DESC 222

Year II

6 ECON 301, 302
6 ECON 303, 304
6 FINA 315, MARK 350
6 MANA 340, 475
6 ECON elective***

Year III

12 Chosen from ECON 401[3], 403[3], 408[6], 421[3], 422[3], 425[3], 426[3], 432[3], 435[3], 442[3], 443[3]
6 Chosen from 400-level ECON courses
3 DESC 250
6 MANA 460, and ECON elective in consultation with the Economics Department
3 Elective chosen from within the Faculty of Commerce and Administration or the Department of Economics

**A student who has been granted exemptions for ECON 201 or 203 must take an equivalent number of credits in Economics.*

***ACCO 213 is a prerequisite and ECON 201 or 203 is a corequisite for FINA 214.*

****If the student does not have a calculus course and a linear algebra course, ECON 325 and 326 should be taken at this stage.*

[1]See §200.7

90 BComm Major in Economics

6 ECON 201*, 203*
6 DESC 243, 244[1]
6 MARK 213, FINA 214**
6 ACCO 213, 218
6 MANA 266, DESC 222
6 ECON 301, 302
6 ECON 303, 304
6 FINA 315, MARK 350
6 MANA 340, 475
3 BUSC 300
3 ECON elective
6 ECON elective (400 level)
6 ECON elective
3 DESC 250
6 MANA 460, and elective, in consultation with the Economics Department
6 Elective
3 Elective chosen from within the Faculty of Commerce and Administration or the Department of Economics

**A student who has been granted exemptions for ECON 201 or 203 must take an equivalent number of credits in Economics.*

***ACCO 213 is a prerequisite and ECON 201 or 203 is a corequisite for FINA 214.*

[1]See §200.7

61.70 Finance

Associate Professor and Chair of the Department
ABOLHASSAN JALILVAND

Professors
MOHSEN ANVARI
LAWRENCE KRYZANOWSKI

Associate Professors
LAWRENCE BOYLE
ABRAHAM BRODT
BRUCE ENGLISH
ALAN HOCHSTEIN
ARVIND JAIN
CLEVELAND PATTERSON
ABDUL RAHMAN
LATHA SHANKER
LORNE SWITZER

Assistant Professors
GREGORY LYPNY
JIHAD NADER
TAE PARK

Lecturer
ARSHAD AHMAD

Sessional Lecturers
WAJEEH ELALI
PENELOPE ELLISON
ANN LEDUC
JAY MANNADIAR
THERESE TRAINOR

Executive-In-Residence
PIERRE SEVIGNY

24 Major in Finance
3 FINA 440
3 FINA 460
18 additional 400-level credits offered by the Department

12 Minor in Finance
3 FINA 440
3 FINA 460
6 additional 400-level credits offered by the Department

FINA 214 ***Introduction to Finance I*** (3 credits)
Prerequisite: ACCO 213; DESC 243; ECON 201 or 203 previously or concurrently. This course deals with corporate financial analysis and planning, the management of current assets, the time value of money concept, fixed asset management and capital expenditure decisions. *NOTE A/See §200.2*
NOTE: Students who have received credit for FINA 314 may not take this course for credit.

FINA 315 ***Introduction to Finance II*** (3 credits)
Prerequisite: FINA 214. This course deals with sources of short and long-term financing, leasing, the cost of capital, capital structure and valuation, dividend policy, and expansion and failure. *NOTE A/See §200.2*

FINA 417 ***Capital Budgeting Theory*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course provides an in-depth coverage of analytical techniques for rational capital investment decisions by corporations. Emphasis is placed on the assessment of investment choices within the overall strategic framework of the firm, and on the practical as well as the theoretical aspects of the decision process. *NOTE A/See §200.2*

FINA 419 ***Options and Futures*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course on options and futures is a comprehensive analysis of the options and futures markets in North America. The student is introduced to the different markets for these instruments and their institutional details. The different types of options and futures currently trading are examined. The principles of valuation of futures and options, their use in risk management through hedging techniques and their use in speculative strategies are studied. Emphasis is placed on the analysis of financial options and futures.

FINA 420 ***Short-Term Financial Management*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course is concerned with the key aspects of short-term financial management. It begins with a brief coverage of the institutional environment facing the financial manager in Canada. A detailed coverage of sources for short-term borrowing and investments is presented. The structure of the Canadian financial systems along with a description of the various methods of effecting payments as well as the clearing and settlement system are covered. Topics in overall liquidity management are briefly reviewed from a theoretical perspective. Traditional subjects in cash management, i.e., collections, disbursement and control, forecasting, company bank relationship, and short-term investment and borrowing are examined next. Such new developments as Electronic Data Interchange and EFT/POS

are also examined. The course also provides a coverage of trade credit both from a theoretical positive standpoint and normative viewpoints.

FINA 424 ***Personal Finance Management*** (3 credits)
Prerequisite: FINA 315. This course is designed to assist the student in making rational decisions when consulting in personal financial activities. Topics covered include: personal budgeting, spending pattern analysis, the proper use of credit, housing, investment (both traditional and modern), tax and retirement planning. Case studies are utilized when possible.

FINA 430 ***Financial Management*** (3 credits)
Prerequisite: FINA 315. The intent of this course is to develop skill in the identification and structuring of financial problems, in the selection of appropriate analytical techniques for their solution, and in the application of such techniques to decision-making in actual business situations. A variety of cases are used to achieve these objectives. *NOTE A/See §200.2*

FINA 431 ***Applied Corporate Finance*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course uses case discussions to focus on the application of the financial management principles learned in FINA 440 and FINA 460 in real-world contexts, with particular emphasis on capital structure and dividend policies, valuation and corporation acquisitions, cost of capital determination, and capital expenditure decisions. *NOTE A/See §200.2*

FINA 440 ***Theory of Finance*** (3 credits)
Prerequisite: FINA 315. This course is designed to provide a rigorous theoretical foundation on which subsequent 400-level finance courses can be built. The first part of the course covers, in depth, the theories of investor choice under conditions of uncertainty focusing on portfolio theory, asset pricing and option pricing theories. Building on such theoretical foundations, the second part of the course focuses on developing the basic theory of the firm's decision-making process under ideal capital market conditions. This analysis is extended to incorporate the implications of some fundamental imperfections such as agency problems and informational imperfections. *NOTE A/See §200.2*

FINA 441 ***Theory of Corporate Finance*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course focuses on the application of the modern theory of finance to corporate decisions. Building upon the material covered in FINA 440 and 460, it examines the firm's investment and financial decisions under various economic and capital market conditions. More specifically, topics covered include cost of capital, capital structure decisions, evaluation and the application of the recently developed financial innovations in the debt market (e.g., swaps and junk bonds), mergers and acquisitions and leveraged buyout decisions, and dividend and equity management strategies. *NOTE A/See §200.2*

FINA 452 ***Investment Analysis*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course is devoted to an examination of the investment decision, both from the viewpoint of the individual investor and the institutional investor. Valuation of different financial instruments such as Treasury bills, bonds, common stocks, preferred stocks, options, warrants, convertibles, rights, futures both commodity and financial, mutual funds and pension funds and the use of different instruments in various investment strategies such as investment, speculation, hedging and arbitrage are examined. Techniques examined by analysts to pick investments, such as fundamental analysis, technical analysis and quantitative analysis are studied. *NOTE A/See §200.2*

FINA 453 ***Portfolio Management*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course focuses on modern investment theory and its application to the management of entire portfolios. Topics include: a) construction of optimal asset portfolios using techniques such as the single index model, b) extensions of the capital asset pricing model-theory and tests example, the zero-beta model, c) criteria for evaluation of investment performance, d) active versus passive portfolio management, e) portfolio insurance, f) market efficiency. A computer exercise is assigned to illustrate the application of the theory. *NOTE A/See §200.2*

FINA 455 ***Seminar in Finance*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course is intended primarily for Majors students and provides an opportunity for more intensive study in one or more specific topics of finance. The topic varies according to the special interests of the professor and the students. Students repeating FINA 455 register for credits under Finance 456. *NOTE A/See §200.2*

NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

FINA 460 ***Domestic and International Capital Markets*** (3 credits)
Prerequisite: FINA 315. This course provides an understanding of the way in which domestic and international capital markets operate. It is designed to be a foundation course for all subsequent 400-level finance courses. Emphasis is placed on describing the nature and functioning of the Canadian financial system and evaluating its efficiency in terms of the relevant theories of financial intermediation. Specific topics that are addressed include the term structure of interest rates, and the structure and operations of securities, mortgages, and money markets. The latter part of the course extends the analysis into an international framework with a discussion of the international monetary system, foreign exchange markets, overseas capital markets, and an introduction to foreign exchange risk exposure and management. *NOTE A/See §200.2*

FINA 461 ***Management of Financial Institutions*** (3 credits)
Prerequisite: FINA 440; FINA 460. The objective of this course is to provide a framework for understanding the fundamental variables and relationships that affect the management of Canadian financial institutions in the domestic and international environment. Specific topics include: an overview of the financial institutions sector, the regulatory framework, performance and cost analysis, strategic planning, capital structure issues, asset and liability management, management of financial institution risk, international intermediation, and financial innovation. *NOTE A/See §200.2*

FINA 467 ***(also listed as IBUS 469) International Financial Management*** (3 credits)
Prerequisite: FINA 315. This course is designed for students to acquire and demonstrate knowledge of the fundamental principles and issues in international financial management. It covers such topics as: foreign exchange markets, exchange rate behaviour, structure and meaning of the international balance of payments, the functioning of fixed and floating exchange rate systems, short- and long-term investment and borrowing decisions, eurocurrency markets, foreign exchange risk management and capital budgeting decisions for overseas investment. In sum, the topics are covered from the perspective of an individual who wishes to know how the international financial environment will affect the firm.
NOTE: Students who have received credit for IBUS 469 may not take this course for credit.

FINA 491 ***Real Estate Investment and Finance*** (3 credits)
Prerequisite: FINA 440; FINA 460. This course deals with the central issues in real estate finance and investment. Topics in property management and real estate development which are covered include the organization of real estate markets, pricing, inflation, taxation, valuation methods, brokerage, ownership forms, and real estate law.

61.80 International Business

Programme Director
KAILASH C. DHAWAN

24	**Major in International Business**	**12**	**Minor in International Business**
12	IBUS 462, IBUS 465, IBUS 466, IBUS 469	6	IBUS 462, IBUS 469
12	Additional credits from IBUS 467, IBUS 468, IBUS 470, IBUS 471, IBUS 492, IBUS 493, ECON 341, ECON 377, ECON 442, ECON 443, POLI 315, POLI 321, POLI 323	6	IBUS 465, IBUS 466, IBUS 467, IBUS 468, IBUS 470, IBUS 471, IBUS 492, IBUS 493

IBUS 462 ***(also listed as MARK 462)*** ***Environment of World Business*** (3 credits)
Prerequisite: ACCO 218; DESC 244; FINA 214; MANA 266; MARK 350. This is a foundation course in international business; the objective is to present information which exposes the student to cultural, social, political, economic, legal, and financial environments in which Canadian business executives manage their operations abroad. All students are encouraged to develop their own philosophy toward international business activities by developing research and analytical skills in analyzing current and long-term problems perceived in different economic systems and environments. Specific topics include empirical dimensions of world economy, economic development, international trade and investment patterns, regional economic co-operation, area studies, Canadian nationalism, and foreign investment in Canada, etc.
NOTE: Students who have received credit for MARK 462 may not take this course for credit.

IBUS 465 ***(also listed as MARK 465)*** ***International Marketing Management*** (3 credits)
Prerequisite: MARK 350; MARK 462 or IBUS 462. This course studies the management approach to international marketing, with emphasis on key variables that are controllable by the international marketing manager. Attention is focused on market measurement, product policy, channels, pricing, and promotion, with special emphasis on the development and control of multinational marketing strategies and programmes.
NOTE: Students who have received credit for MARK 465 may not take this course for credit.

IBUS 466 ***(also listed as MANA 466)*** ***Management of Multinational Corporations*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; MANA 340. This is a course that demonstrates the analytical tools of operations and organization theory applicable within a multinational company. The course is designed to give students a grasp of the problems of strategy formulation and organization, and inculcates a general knowledge of the major parameters in which an international manager operates. Focus is on the Canadian, as well as other international companies based in U.S.A., Europe, Japan, etc.
NOTE: Students who have received credit for MANA 466 may not take this course for credit.

IBUS 467 ***(also listed as MARK 467)*** ***Marketing in Selected Parts of the World*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This is an area study course in which selected parts of the world are covered in depth. The course demonstrates the use of sources and methodologies not typical in Canadian business research. Countries/region to be covered may include Japan, Pacific Region, the Middle East, India, China, Russia, East European Countries, Western Europe, Africa and Latin America.
NOTE: Students who have received credit for MARK 467 may not take this course for credit.

IBUS 468 ***(also listed as MARK 468)*** ***Export/Import Procedures and Organization*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This course deals with the administration of foreign trade from a Canadian perspective with emphasis on applied techniques. Topics to be covered include world trade patterns, trade theories, export financing, custom tariffs and operation, international transportation and government export promotion services.
NOTE: Students who have received credit for MARK 468 may not take this course for credit.

IBUS 469 ***(also listed as FINA 467)*** ***International Financial Management*** (3 credits)
Prerequisite: FINA 315. This course is designed for students to acquire and demonstrate knowledge of the fundamental principles and issues in international financial management. It covers such topics as: foreign exchange markets, exchange rate behaviour, structure and meaning of the international balance of payments, the functioning of fixed and floating exchange rate systems, short and long-term investment and borrowing decisions, eurocurrency markets, foreign exchange risk management and capital budgeting decisions for overseas investment. In sum, the topics are covered from the perspective of an individual who wishes to know how the international financial environment will affect the firm.
NOTE: Students who have received credit for FINA 467 may not take this course for credit.

IBUS 470 ***(also listed as ACCO 468)*** ***International Accounting*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; ACCO 218; FINA 315. This course examines accounting practices employed by different countries; accounting and financial control of international operations, and various consolidation procedures and their effect on the interpretation of financial statements are discussed.
NOTE: Students who have received credit for ACCO 468 may not take this course for credit.
NOTE: This course will be offered in the second term only.

IBUS 471 ***Topics in International Business*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This course is intended primarily to provide an opportunity for more intensive study in one or more specific topics of International Business. The topic will vary according to the special interests of the professor and the students.
NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

IBUS 492 ***(also listed as MARK 492)*** ***Cross-Cultural Communications and Management*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This course deals with the multicultural dimensions of international business operations. The objective is to develop Canadian managerial skills for effective performance in an international setting. Topics to be covered include international negotiations, management of multicultural personnel, cross-cultural consumer behaviour profile, cross-cultural communication, and other cultural aspects of marketing strategy.
NOTE: Students who have received credit for MARK 492 may not take this course for credit.

IBUS 493 ***(also listed as MANA 493)*** ***International Business Law*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; MANA 475. This course is an introduction to international business law. The focus is Canadian but comparative material is included and problems relating to other legal systems are examined. Topics to be covered include private loans applicable to international business transactions, international sales, federal regulations, export controls and anti-dumping, export insurances, and bilateral trade agreements.
NOTE: Students who have received credit for MANA 493 may not take this course for credit.

61.90 Management

Associate Professor and Chair of the Department
A. BAKR IBRAHIM

Professors
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GARY JOHNS
JOE KELLY

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LINDA DYER
MARTIN FRANKLIN
HAROLD GRAM
RICHARD LANDE
JEAN MCGUIRE
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PETER E. PITSILADIS
J. BRUCE PRINCE
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WILLIAM TAYLOR

Assistant Professors
BLAKE E. ASHFORTH
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IRENE DEVINE
ALAN SAKS
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Sessional Lecturers
DAVID FRANKLIN
JOANNE GROSSMAN
ROSALIND KNITTER
DEBBIE LAXER
TOM O'CONNELL
TIMA PETRUSHKA
FREDA RASHKOVAN
KAREN ROTHMAN
BARBARA SHAPIRO
MARJORIE SHARP

Executives-in-Residence
HENRI COLAS
JAN MEYERS

24 Major in Administrative Management
3 MANA 341
3 MANA 345
3 MANA 364
3 MANA 369
3 MANA 461
3 MANA 462
3 MANA 476
3 one of MANA 402, 420, 442, 474

12 Minor in Administrative Management
3 MANA 369
3 MANA 442
3 MANA 461
3 MANA from the programme of Major in Administrative Management

12 Minor in Entrepreneurship and Small Business Management
3 MANA 454
3 MANA 451
3 MANA 452
3 MARK 352 or 485

24 Major in Human Resource Management
3 MANA 341
3 MANA 462
3 MANA 463
15 Credits of MANA 342, 364, 365, 420, 441, 443, 444, 445, 479

12 Minor in Personnel Management
3 MANA 341
3 MANA 364
3 MANA 462
3 MANA from programme of Major in Human Resource Management

12 Minor in Managerial Law
3 MANA 476
3 MANA 477
3 MANA 478
3 MANA 479

24 Major in Industrial Relations
3 MANA 364
3 MANA 365
3 MANA 462
3 MANA 472
3 MANA 479
3 ECON 381 or 481*
3 one of MANA 469, 470, 499
3 one of SOCI 346, 347

NOTE: In order to make it possible to take the programme in twenty-four (24) credits, one or more Sociology courses will be subdivided next year.

**Students who wish to take ECON 481 without ECON 381 as a prerequisite must seek permission from the Economics Department.*

MANA 211 ***Business Law*** (6 credits)
A general survey of the law obtaining in the Province of Québec, with special emphasis on the aspects thereof relating to business and commerce. It includes a basic outline of the law of Domicile, Marriage, Persons, Property, Ownership and its modifications, Successions, Gifts and Wills, Testamentary Executors, Contracts, Quasi-Contracts, Offences and Quasi-Offences, Privileges, Hypothecs and Prescription, and a more detailed study of the Contract of Sale, Lease and Hire of Things and of Work, Mandate, Loan, Deposit, Partnership, Suretyship, Pledge, Insurance, and an outline of the basic law applying to Negotiable Instruments. Corporations, Carriers, Bankruptcy and Winding Up, and Copyrights, Patents, and Trade Marks. *NOTE A/See §200.2*
NOTE: Commerce and Administration students may not take this course for credit.

MANA 213 ***Foundations of Behaviour**** (3 credits)
The purpose of this course is to introduce the student to those behavioural concepts relevant to the study of organizational problems. Topics include perception, attitudes, personality, group behaviour, roles, and culture as they relate to organizational processes.
NOTE: Students who have received credit for PSYCH 200 or equivalent may not take MANA 213 for credit.
**This course will eventually be phased out of the course offerings and may not be taken for credit by students admitted to the University on or after June 1, 1986.*

MANA 266 ***Foundations of Modern Management*** (3 credits)
This course introduces students to the basic elements of the managerial process (e.g., planning, organizing, controlling, motivating, etc.) and presents the historical base upon which contemporary management theory and practice is built. The evolution and scope of management are considered, with illustrations from both large and small Canadian enterprises.

MANA 340 ***Organizational Behaviour*** (3 credits)
Prerequisite: MANA 266. This course is designed to provide the student with an opportunity to study individual behaviour in formal organizations. Through theoretical, case and experiential approaches, the focus of instruction progressively moves through individual and group levels of analysis. Topics covered in this course include perception, learning, personality, motivation, leadership and group behaviour. The objective of the course is to improve the student's perceptual, analytical and problem-solving skills in the diagnosis and innovative resolution of behavioural problems which are requisite for organizational performance.

MANA 341 ***Organization Theory*** (3 credits)
Prerequisite: MANA 340. The function, structure, and processes of organizations provide the focus for study. Inter-relationships among the psychosocial, technological, and formal properties of organizations are examined. Emphasis is placed on the diagnosis, analysis of organizational problems, and optimal-design alternatives for improving organizational performance and effectiveness are explored. The objective is to provide the student with a thorough understanding of the nature of contemporary complex organizations.

MANA 342 ***Organizational Change*** (3 credits)
Prerequisite: MANA 340. An administrative perspective of the behavioural and rational empirical strategies for effecting change in organizations. Emphasis is placed on an eclectic approach to the planning and implementation of change. Models and methods of change are reviewed, and opportunities for the development of change-agent skills are provided.

MANA 345 ***Production Management I*** (3 credits)
Prerequisite: DESC 314 or DESC 315* or DESC 250**. It is the production function of the enterprise that gives us the products or services that we sell. In this course, we attempt to help management guide and control this area. Topics include government programmes and incentives, health and safety regulations, production-incentive systems, management-information systems, and plant location.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*

MANA 346 ***Production Management II*** (3 credits)
Prerequisite: MANA 345. This course is a continuation of Production Management I and is designed to supplement the knowledge of those students choosing to Minor in Production Management. One or more of the following topics is dealt with in depth: work measurement and development of standard data for incentive systems; production planning, scheduling, and control; research and development; plant layout and materials handling.

MANA 364 ***Industrial Relations*** (3 credits)
Prerequisite: MANA 340. Labour relations is a survey course designed to provide a practical and comprehensive approach to the state of labour-management relations in Canada. *NOTE A/See §200.2*
NOTE: Students who have received credit for MANA 464 may not take this course for credit.

MANA 365 ***Collective Bargaining Negotiation*** (3 credits)
Prerequisite: MANA 364. This course is designed to help the student to look at day-to-day problems connected with negotiation and administration of collective bargaining agreements. The course puts some stress on the behavioural aspects of industrial relations. *NOTE A/See §200.2*
NOTE: Students who have received credit for MANA 465 may not take this course for credit.

MANA 368 ***Social Aspects of Enterprise*** (3 credits)
Prerequisite: MANA 266. The purpose of this course is to facilitate understanding of the impact of social, economic, political, and ethical environments on the process of managerial decision-making. Consideration is given to the conceptual foundations of business, including the business corporation, its function, and the legitimacy of its power structure. *NOTE A/See §200.2*

MANA 369 ***Canadian Business and its Environment*** (3 credits)
Prerequisite: DESC 244; ECON 203; MANA 266; MARK 213; FINA 214. The purpose of this course is to examine the functioning of Canadian business and its relationships with its public, including stockholders, consumers, employees, labour, community, and government. Major contemporary issues, such as the impact of technology on people and the physical environment, are examined. *NOTE A/See §200.2*

MANA 402 ***Supervisory Practice*** (3 credits)
Prerequisite: MANA 340. A seminar focusing on the emerging understanding of leadership and supervisory techniques in task-oriented organizations. Contemporary concepts and research on leadership and supervision are examined. The seminar analyzes the multiple bases for influence and the situational or contingency aspects of leadership. A balance among the conceptual, diagnostic, and experiential approaches to the development of supervisory capability is emphasized.

MANA 409 ***Principles of Insurance*** (3 credits)
This course examines the growth of insurance companies in Canada and their effect upon the economy. In addition, the basic fundamentals of insurance are covered, including such topics as life insurance, income replacement, annuities, group insurance, liability, auto, fire, and theft insurance. Practical applications and use of insurance dealing with both personal and business situations are noted. *NOTE A/See §200.2*

MANA 420 ***Business Research Methods*** (3 credits)
Prerequisite: MANA 340, DESC 244. This seminar focuses on the means by which social and organizational data can be gathered, analyzed, and interpreted. Needs of the firm for efficient, timely, and unobtrusive research are given special attention. Topic coverage includes applications of the scientific method, research design, field research techniques, data analysis, research utilization, and use of existing information sources. Student projects parallel the classroom activities by designing and conducting business research studies of limited scale.

MANA 441 ***Conflict Management*** (3 credits)
Prerequisite: MANA 340. This course examines the causes and consequences of conflict and alternative strategies for managing conflict. It utilizes lectures, videos, cases, interaction exercises, and video-taping to convey theory, empirical research and to enhance one's ability to effectively manage conflict.

MANA 442 ***Managerial Concepts*** (3 credits)
Prerequisite: MANA 340. This course provides an opportunity for intense study of recent developmental topics within the discipline. Topics might include: Women in Management; Managing in Québec; Management by Objectives; Long-range Planning; Equity Theories of Motivation; Changing Roles of Managers.

MANA 443 ***Compensation and Benefits Management*** (3 credits)
Prerequisite: MANA 462. The purpose of this course is to provide a thorough understanding of the role, conceptual basis, procedures and methods associated with the management and administration of compensation and benefits within an organization. Issues addressing job families and ladders, salary surveys, position valuation, pay equity, incentive compensation and benefits administration are addressed.

MANA 444 ***Training and Development*** (3 credits)
Prerequisite: MANA 462. This course examines the conceptual and practical issues regarding orientation of new employees, socialization process, learning theories, and diagnoses, training technologies, developmental strategies, and the management of the training and development function.

MANA 445 ***Health and Safety Management*** (3 credits)
Prerequisite: MANA 462. This course examines the critical aspects of health and safety administration within organizations. It provides a brief overview of the relevant legislation and focuses upon prevention, causes, detection, intervention, reintegration, epidemiological and clinical investigation and health development. Physical and psychological aspects of health and safety are examined.

MANA 451 ***Managing a Small Business*** (3 credits)
Prerequisite: DESC 244; ECON 203; MANA 266; MARK 213; FINA 214. This introductory course emphasizes the *operational* aspects of management that are uniquely important to a small enterprise. It provides opportunity to practise operational decision-making under conditions characteristic for small firms.

MANA 452 ***Entrepreneurship*** (3 credits)
Prerequisite: DESC 244; ECON 203; MANA 266; MARK 213; FINA 214. This course provides for students a source of the basic techniques needed to start or purchase a business of their own. Consideration is given to evaluation methods, the nature of an entrepreneur, legal and tax aspects and other aspects of interest to an individual starting a venture as a career alternative.

MANA 454 ***Policy and Strategy for the Small Enterprise*** (3 credits)
Prerequisite: FINA 315; MARK 350; DESC 314 or DESC 315* or DESC 250**; MANA 340; MANA 475; MANA 451; MANA 452; and 39 additional credits in the Faculty of Commerce and Administration. This course helps the student to become familiar with problems of *strategy formulation* and *implementation* within the framework of starting and/or managing a small or medium-sized enterprise. All functions of management are considered in this context and field work is encouraged.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*

MANA 460 ***Business Policy I*** (3 credits)
Prerequisite: FINA 315; MARK 350; DESC 314 or DESC 315* or DESC 250**; MANA 340; and 45 additional credits in the BComm or BAdmin programme. This course is designed to introduce the student to strategy formulation and implementation. Emphasis is on integrating the learning of the programme in order to develop in students a global view of the organization. Cases are drawn from the private, public, and non-profit sectors, and consideration is given to policy problems in the small business and large corporation context, as well as the Canadian and international milieus.
**For students admitted to the University effective June 1, 1986.*
***For students admitted to the University effective June 1, 1989.*

MANA 461 ***Business Policy II*** (3 credits)
Prerequisite: MANA 460. This course concentrates on how the strategy formulated in Business Policy I is implemented by the organization. Organization structures are studied in differing environments. The relationships between organization structures and the organization's strategy are analyzed. The problems encountered by general managers as well as middle managers in the process of the implementation of the set policies are studied. *NOTE A/See §200.2*

MANA 462 ***Personnel Management I*** (3 credits)
Prerequisite: MANA 340. The aim of the course is to provide a sound background in fundamentals, theory, principles and practice of human resource management. It focuses on the areas of Human Resource Planning, Personnel Recruitment, Selection and Placement, Performance Appraisal and Career Planning. *NOTE A/See §200.2*

MANA 463 ***Personnel Management II*** (3 credits)
Prerequisite: MANA 462 and two Human Resource Management Major course electives. This course is a final-year integrative seminar for Human Resource Management majors. It focuses on the philosophies underlying current Human Resource Management principles and policies and the processes of their implementation. It utilizes cases to integrate Human Resource Management areas such as recruitment, selection, training, performance appraisal, compensation and benefits administration.

MANA 466 ***(also listed as IBUS 466) Management of Multinational Corporations*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; MANA 340. This is a course that demonstrates the analytical tools of operations and organization theory applicable within a multinational company. The course is designed to give students a grasp of the problems of strategy formulation and organization, and inculcates a general knowledge of the major parameters in which an international manager operates. Focus is on the Canadian as well as other international companies based in U.S.A., Europe, Japan, etc.
NOTE: Students who have received credit for IBUS 466 may not take this course for credit.

MANA 467 ***Management Theory — Advanced*** (3 credits)
Prerequisite: MANA 266. This course attempts to develop further the conceptual framework which was established in Management Theory I. To this end, it examines selected management concepts and appraise their value in terms of their application to the actual practice of business. Issues such as the effect of innovation and technological change, managing the knowledge worker, organization planning, and comparative management are considered. *NOTE A/See §200.2*

MANA 468 ***North American Labour Movements*** (3 credits)
Prerequisite: MANA 364. This course focuses on the evolution of the labour movements in the U.S., Canada and Québec since 1945. The structure and philosophy of American, Canadian and Québec unions since that date are also analyzed. The similarities and dissimilarities of the labour movements in the U.S., Canada and Québec, their impact on society, and the emerging role of the state in union affairs are also covered.

MANA 469 ***Industrial Relations in the Public Sector*** (3 credits)
Prerequisite: MANA 364. Historically, the government plays a third party role in collective bargaining. But as the state emerges as the largest employer in advanced industrial society, its combined roles as employer and mediator demand clarification and modernization. This course analyzes the development of the state as an employer, the growth of public sector unionism, and the impact of public sector collective bargaining on the private sector. Emphasis is on the Québec and Canadian experiences, with comparisons made to public sector industrial relations in other countries as well.

MANA 470 ***Comparative Industrial Relations Systems*** (3 credits)
Prerequisite: MANA 364. This course begins by presenting and contrasting the major theories of labour-management-state competition for control of the work situation. It then moves to applying those theories to national industrial relations systems in advanced industrial capitalist societies, in developed state socialist societies, and in under-developed societies.

MANA 471 ***Issues in Québec Industrial Relations*** (3 credits)
Prerequisite: MANA 364. In this course, the focus is on industrial relations in specific industrial sectors in Québec, stressing the impact of interests and forces outside the sector which influence the nature of industrial relations within it. The specific sectors are chosen each term by the instructor and the students in order to respond to special interests of the students.

MANA 472 ***Grievance and Arbitration*** (3 credits)
Prerequisite: MANA 364. What is the nature and limits of a collective agreement? What can be covered and what not? This courses discusses these questions and then goes on to analyze the grievance process and the various forms of grievance arbitration from technical and social perspectives.

MANA 474 ***Institutional Administration*** (3 credits)
Prerequisite: MANA 340. Management of institutions and agencies in the non-profit (private and public) sector presents unique opportunities and challenges to the manager. This class provides an introduction to that field. Emphasis is given to those characteristics of the organization and functioning of these programmes which distinguish them from commercial firms, including the peculiar nature of human services, and the influence of social-political processes. Class activities utilize theoretical and case material and field observations. Student projects concentrate on policy formulation and administrative function in an agency of the student's choice.

MANA 475 ***Business Law I*** (3 credits)
Prerequisite: DESC 243; ECON 203; MANA 266; MARK 213; FINA 214. This course deals with the Canadian and Québec Law governing business organizations, and the Québec Civil Law concerning persons, property, and ownership obligations, civil responsibility, contracts in general and mandate.

MANA 476 ***Business Law II*** (3 credits)
Prerequisite: MANA 475. Federal and provincial government regulation of business, including bankruptcy, anti-combines, trade marks and patents, labour law, insurance, special commercial contracts including secured transactions, fair employment, environmental law.

MANA 477 ***The Law of Insolvency and Secured Transactions*** (3 credits)
Prerequisite: MANA 475. An examination of the various laws and cases, both Federal and Provincial, across Canada, governing commercial insolvency, with particular emphasis upon the liability of directors and officers, and the creditor's rights in bankruptcy, including the role of inspectors and the trustee. An examination of the various forms of secured transactions, of which creditors may avail themselves, more particularly financial institutions, including assignment of book debts, pledge, mortgages, bonds, trust deeds.

MANA 478 ***Company Law*** (3 credits)
Prerequisite: MANA 475. The examination of important legal issues relating to the business corporation, including an analysis of their legal nature and structure, and the powers, rights, and obligations of directors, officers, and shareholders, including analysis of the legal implications, insider trading, company re-organization, mergers, joint ventures, and takeovers. These matters are studied through the Federal, Québec, and Ontario Companies' Acts and relevant court cases.

MANA 479 ***Labour Law*** (3 credits)
Prerequisite: MANA 475. A study of the law and relevant court cases dealing with major labour-management issues, including collective bargaining, union certification, strikes, lock-outs, grievances, and arbitration. Covers Canadian law, primarily that of Québec.

MANA 480 ***Transportation Policy*** (3 credits)
Prerequisite: MANA 340. This course provides an overview of the economic and institutional setting of the transportation system, including both freight and passenger operations. Government and corporate policies affecting shippers and carriers are examined, as well as policy development in a deregulated environment. This course provides an introduction to the transportation industry. The surface, both rail and truck, as well as marine modes are covered in terms of the regulatory issues which impact upon the movement of freight. Attention is also given to passenger transportation in the air and bus modes.

MANA 493 ***(also listed as IBUS 493) International Business Law*** (3 credits)
Prerequisite: MARK 462 or IBUS 462; MANA 475. This course is an introduction to international business law. The focus is Canadian but comparative material is included and problems relating to other legal systems are examined. Topics to be covered include private loans applicable to international business transactions, international sales, federal regulations, export controls and anti-dumping, export insurances, and bilateral trade agreements.
NOTE: Students who have received credit for IBUS 493 may not take this course for credit.

MANA 499 ***Special Topics in Administration*** (3 credits)
Prerequisite: Written permission of the Department. Intended to complement and supplement business courses taken previously or concurrently, this course emphasizes business literature and modern thought. Students are encouraged to work independently on research topics of interest to them. Students repeating MANA 499 register for credits under MANA 498. *NOTE A/See §200.2*
NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

61.100 Marketing

Associate Professor and Chair of Department
ZEKI B. GIDENGIL

Professors
V.H. (MANEK) KIRPALANI
MICHEL LAROCHE
RONALD McTAVISH

Associate Professors
BRYAN BARBIERI
MICHEL J. BERGIER
B. KEMAL BÜYÜKKURT
ULRIKE de BRENTANI
KAILASH C. DHAWAN
CHANKON KIM
K. LEE MCGOWN
PETER PASOLD
JERRY ROSENBLATT
CHRISTOPHER A. ROSS

Assistant Professors
MICHAEL K.M. HUI
ANNAMMA JOY
CHUNG KOO KIM

Sessional Lecturers
CHARLES CRAWFORD
DAVID MOSCOVITZ
HAROLD SIMPKINS

24 Major in Marketing
3 MARK 352
3 MARK 402
3 MARK 490
15 MARK credits offered by the Department.

12 Minor in Marketing
3 MARK 352
3 MARK 402
3 MARK 490
3 MARK credits offered by the Department.

CERTIFICATE IN MARKETING RESEARCH

NOTE: This programme is not open to students registered in a programme leading to the degrees of Bachelor of Commerce or Bachelor of Administration.

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Admission Requirements
a) Diploma of Collegial Studies or the equivalent; MATH 208 and 209 or equivalent
or
b) Mature Students: MATH 206, 208, 209 or the equivalent, and a minimum of two years business experience in a supervisory capacity.

30 Certificate in Marketing Research
3 MARK 213
3 MARK 350
3 MARK 352
3 MARK 402
3 MARK 452
3 DESC 222
3 DESC 243
3 DESC 244
3 DESC 375
3 DESC 477

MINOR IN MARKETING RESEARCH

NOTE: This programme is not open to students registered in a programme leading to the degrees of Bachelor of Commerce or Bachelor of Administration.

30 Minor in Marketing Research
3 MARK 213
3 MARK 350
3 MARK 352
3 MARK 402
3 MARK 452
3 DESC 222
3 DESC 243
3 DESC 244
3 DESC 375
3 DESC 477

MARK 213 ***The Marketing Process (Introductory)*** (3 credits)
Purpose/Objectives: The course examines the nature of Marketing, its role in society and the inter-relationships that are operative within the Marketing process — both externally, as related to society and the consumer, and internally as related to the organization of the Marketing process within the firm. Many of the factors influencing these relationships are examined. NOTE A/See §200.2

MARK 350 ***Marketing Management*** (3 credits)
Prerequisite: MARK 213. Purpose/Objectives: The course is an introduction to the managerial concepts and practices of Marketing. The four basic elements of the marketing mix — the product, the price, promotion and distribution—and their interrelationships are examined. Use of the case method help

students apply these concepts to realistic marketing problems in a host of business settings, including the small business and the international environment. The course builds on the concepts presented in MARK 213 and develops in the student a critical appreciation of how the concepts and theories relate to the basic tools of marketing; the ability to manipulate these tools in an integrated fashion in a variety of business settings.

MARK 351 ***Transportation and Marketing Logistics*** (3 credits)
Prerequisite: MARK 350. This course deals with economic principles underlying the various modes of transport: i.e., rail, water, motor, air, and pipeline. Current problems of each are discussed. In addition a survey of the principles of business logistics are covered. Cases are utilized when possible. *NOTE A/See §200.2*
NOTE: Students who have received credit for Administration 350 may not take this course for credit.

MARK 352 ***Buyer Behaviour*** (3 credits)
Prerequisite: MARK 213 and DESC 243. This course analyzes the motivations, roles, and behaviour of the consumers, how they are affected by economic, social, and cultural influences, and how the marketer may model this behaviour for decision-making purposes. *NOTE A/See §200.2*

MARK 402 ***Marketing Research I (Methods)*** (3 credits)
Prerequisite: MARK 350 and DESC 244. The role of research in the marketing process, the role of models, and the development of measurement techniques are discussed. Emphasis is placed on the nature and scope of marketing research methods for obtaining internal and external data, and on the steps and principles involved in gathering and analyzing data. The student is also briefly introduced to applications of marketing research. *NOTE A/See §200.2*

MARK 452 ***Marketing Research II (Application)*** (3 credits)
Prerequisite: MARK 402. The application of marketing research to problem areas such as advertising, sales management and product strategy. Alternative research designs are applied to actual problems. *NOTE A/See §200.2*

MARK 453 ***Advertising and Sales Promotion Management*** (3 credits)
Prerequisite: MARK 350. The objectives of this course are to provide the student with an introduction to an understanding of the principles of advertising and sales promotion from three different viewpoints: the nature of services provided by advertising agencies, the needs of the users (i.e. business, institutions) of these services, the needs of society in economic, ethical and legal terms. *NOTE A/See §200.2*

MARK 454 ***Sales Management*** (3 credits)
Prerequisite: MARK 350. The course deals with the theoretical and applied aspects of management of personal selling. Through cases, simulations and special presentations the student learns how to recruit, select, train, organize, motivate, evaluate, compensate, supervise, and control the sales forces. *NOTE A/See §200.2*

MARK 462 ***(also listed as IBUS 462) Environment of World Business*** (3 credits)
Prerequisite: ACCO 218, DESC 244, FINA 214, MANA 266, MARK 350. This is a foundation course in international business; the objective is to present information which exposes the student to cultural, social, political, economic, legal, and financial environments in which Canadian executives manage their operations abroad. All students are encouraged to develop their own philosophy toward international business activities by developing research and analytical skills in analyzing current and long-term problems perceived in different economic systems and environments. Specific topics include empirical dimensions of world economy, economic development, international trade and investment patterns, regional economic co-operation, area studies, Canadian nationalism, and foreign investment in Canada, etc.
NOTE: Students who have received credit for IBUS 462 may not take this course for credit.

MARK 463 ***Retail Management*** (3 credits)
Prerequisite: MARK 350. This course seeks to apply the theories of marketing and administration to the retail situation. Topics to be covered include site selection for single and multi-unit retail outlets, organizing and staffing the retail operation, the wholesaler-retailer relationship, consumer behaviour in the retail situation. The impact of such new developments as consumer cooperatives, franchising, discounting, and computer technology on the future of retailing is also considered. *NOTE A/See §200.2*

MARK 464 ***Consumerism*** (3 credits)
Prerequisite: MARK 350. The current evolution of marketing and consumerism is subjected to critical evaluation and analytical review. Problem areas which may be examined include: marketing costs and efficiency, the social objectives of and objections to marketing, the impact of marketing on the environment, the "pollution of advertising", ethics of marketers, and the role of governments in the market place. *NOTE A/See §200.2*

MARK 465 ***(also listed as IBUS 465) International Marketing Management*** (3 credits)
Prerequisite: MARK 350; MARK 462 or IBUS 462. This course studies the management approach to international marketing, with emphasis on key variables that are controllable by the international marketing manager. Attention is focused on market measurement, product policy, channels, pricing, and promotion, with special emphasis on the development and control of multinational marketing strategies and programmes.
NOTE: Students who have received credit for IBUS 465 may not take this course for credit.

MARK 467 ***(also listed as IBUS 467) Marketing in Selected Parts of the World*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This is an area study course in which selected parts of the world are covered in depth. The course demonstrates the use of sources and methodologies not typical in Canadian business research. Countries/region to be covered may include Japan, Pacific Region, the Middle East, India, China, Russia, East European Countries, Western Europe, Africa, and Latin America.
NOTE: Students who have received credit for IBUS 467 may not take this course for credit.

MARK 468 ***(also listed as IBUS 468) Export/Import Procedures and Organization*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This course deals with the administration of foreign trade from a Canadian perspective with emphasis on applied techniques. Topics to be covered include world trade patterns, trade theories, export financing, custom tariffs and operation, international transportation and government export promotion services.
NOTE: Students who have received credit for IBUS 468 may not take this course for credit.

MARK 473 ***Advertising Strategy and Planning*** (3 credits)
Prerequisite: MARK 352; MARK 402; MARK 453. This course deals with advanced topics in the strategic application of advertising to marketing problems and opportunities. Its major focus is the development of the advertising plan. Through case studies, assignments and group projects, the student develops a deeper understanding of the various steps involved in developing an advertising campaign in Canada, particularly strategy planning, development of objectives, creative and media planning as well as all forms of advertising research.

MARK 485 ***Industrial Marketing*** (3 credits)
Prerequisite: MARK 350. The course focuses on the managerial aspects of industrial marketing. The concept of organization buying behaviour and its impact on marketing strategy formulation are discussed. Management of the industrial marketing mix considering product service development, intelligence, promotion, channels, and performance measurement is covered, both in existing product lines and new product-launch activities.

MARK 486 ***Product Management*** (3 credits)
Prerequisite: MARK 350. In addition to analyzing product cycles and their characteristics and strategies which relate to each stage, this course delves into some of the more practical aspects of product policy-setting strategy formulation of the analysis, development, and execution of marketing programmes for new and existing products. This course should make the student familiar with one or more product management operations through case discussions and/or field studies.

MARK 487 ***International Transportation and Distribution*** (3 credits)
Prerequisite: MARK 350; DESC 244. The objective of this course is to provide the student with an overview of international transportation and physical distribution marketing strategies. The course deals with matters such as the international flow of goods and people, the different international transportation modes and available equipment, physical distribution logistics, advances in transportation, distribution and communication technology which result in lower costs and time efficiency, intermodal competition and cooperation, government's roles in international transport, the international transportation regulatory environment, and international transportation facilitators such as freight forwarders, customs brokers, and documentation.

MARK 488 ***Passenger Transportation*** (3 credits)
Prerequisite: FINA 214; MARK 350. The object of this course is to make students aware that within the overall field of Transportation an important segment deals with passengers. Through the use of lectures, case studies and project presentations, the student becomes familiar with the concepts related to this field.

MARK 490 ***Marketing Policy*** (3 credits)
Prerequisite: MARK 213; MARK 350 and 9 additional credits in Marketing courses. A capstone course in Marketing, utilizing readings, projects, and selected case studies requiring the student to incorporate concepts and techniques of previous marketing courses in determining marketing policy. *NOTE A/See §200.2*

MARK 491 ***Special Topics Seminar*** (3 credits)
Prerequisite: Written permission of the Department. This seminar is an inquiry into various selected topics which vary from year to year. Students repeating MARK 491 register for credits under MARK 492. *NOTE A/See §200.2*
NOTE: Specific topics for this course and prerequisites relevant in each case will be stated in the Undergraduate Class Schedule.

MARK 492 ***(also listed as IBUS 492) Cross-Cultural Communications and Management*** (3 credits)
Prerequisite: MARK 462 or IBUS 462. This course deals with the multicultural dimensions of international business operations. The objective is to develop Canadian managerial skills for effective performance in an international setting. Topics to be covered include international negotiations, management of multicultural personnel, cross-cultural consumer behaviour profile, cross-cultural communication, and other cultural aspects of marketing strategy.
NOTE: Students who have received credit for IBUS 492 may not take this course for credit.

61.110 Transportation and Distribution Management

12 Minor in Transportation and Distribution Management

6 MARK 351, MANA 480

6 DESC 451, MARK 468, MARK 485, MARK 487, MARK 488, ECON 495

NOTE: This minor is available to Commerce and Administration students only.

61.120 Administration

ADMI 201 ***Introduction to Administration (Administered by the Finance Department)*** (3 credits)

This course is intended to develop a basic understanding of the role of administration in our society. The course includes a survey of different forms of organizations, their social and legal responsibilities, and how they function to achieve their goals.

NOTE: Commerce and Administration students may not take this course for credit.

ADMI 202 ***Perspective on Business (Administered by the Finance Department)*** (3 credits)

This course is designed to review the historical development of business (in Canada in particular) and to examine the relationships between the firm (management) and the owners, the employees, the customers, the government, and the community. Further, it studies some of the problems facing Canadian business today: the dehumanizing aspect, pollution problems, large vs. small firms, foreign ownership, competition, etc.

NOTE: Commerce and Administration students may not take this course for credit.

61.130 Business Communications

BUSC 300 ***Business Communications*** (3 credits)

This course focuses on the principles and techniques of clear, concise, and effective, written and oral communication, especially as they apply to business. The formal, grammatical, and stylistic elements of written and oral business communication are emphasized. Students are also instructed in, and experience, the use of audiovisual means of communication.

CERTIFICATE IN BUSINESS STUDIES

This programme is not open to students registered in a programme leading to the degrees of Bachelor of Commerce or Bachelor of Administration.

Students may transfer into the Certificate programme up to twelve credits earned in an incomplete degree or certificate programme or as an Independent or Special student, provided they are students in good standing. The credits that may be so transferred are determined by the University at the point of entry into the programme.

Admission Requirements

a) Diploma of Collegial Studies or the equivalent; MATH 208 and 209 or the equivalent.

or

b) Mature Students: MATH 206, 208, 209 or the equivalent, and a minimum of two years business experience in a supervisory capacity.

30 Certificate in Business Studies

18 ACCO 213*, ECON 201*, FINA 214*, MANA 266, MARK 213, DESC 243

12 Chosen from ACCO 218, ECON 203, FINA 315, MARK 350, DESC 222, DESC 244

**Please note that ACCO 213 is a prerequisite and ECON 201 or 203 is a corequisite for FINA 214.*

MINOR IN BUSINESS STUDIES

NOTE: This programme is not open to students registered in a programme leading to the degrees of Bachelor of Commerce or Bachelor of Administration.

Admission Requirements

MATH 208 and 209 or equivalent courses.

30 Minor in Business Studies

18 ACCO 213*, ECON 201*, FINA 214*, MANA 266, MARK 213, DESC 243

12 Chosen from ACCO 218, ECON 203, FINA 315, MARK 350, DESC 222, DESC 244

**Please note that ACCO 213 is a prerequisite and ECON 201 or 203 is a corequisite for FINA 214.*

61.150 Computer Science

For a Major in Management Information Systems See §61.50

61.160 Special Certificate Programmes

There are many organizations within the business community designed to serve the needs of people working in specialized areas of business. These organizations recognize that the educational qualifications of those seeking membership must be continually upgraded. Therefore, they sponsor an Academic Certificate which may be obtained through correspondence courses, or through a lecture programme.

The Faculty of Commerce and Administration cooperates with these business organizations by permitting personnel to register as Special (partial) students, and to take courses leading to a certificate to be awarded by the organization concerned.

Students must comply with the University regulations regarding dates of application and Visiting Commerce student entrance requirements as outlined in the Academic Calendar §11. In addition, they must meet the requirements of the specific organization.

The credit course taken may be applied towards the Bachelor of Commerce degree, provided the student meets the admission requirements and wishes to transfer from Visiting Commerce status to undergraduate status after completing a certificate programme. Students are advised that they must meet the Bachelor of Commerce curriculum requirements in force at the date of transfer.

Each certificate programme has one or more special courses required to complete the programme. These courses do not carry credit toward a Bachelor's degree and are designated as non-credit courses.

Students interested in the following certificate programmes may obtain details of required courses from the organization concerned:

The American Marketing Association (Montréal Chapter)
Institute of Canadian Bankers
Association of Human Resources Professionals of the Province of Québec
The Insurance Institute of Canada
The Trust Companies Institute of Canada
Professional Secretaries International (CPS)
Canadian Institute of Management

61.170 Special Programmes in Accountancy

The three professional organizations listed below recognize certain Concordia University courses for course exemptions or standing in their professional designation programmes.

L'ORDRE DES COMPTABLES AGRÉÉS DU QUÉBEC: Chartered Accountant (CA)

The Faculty of Commerce and Administration offers a Diploma in Accountancy which has been approved by the Order of Chartered Accountants of Québec. Entry into the programme normally requires a Bachelor's degree in Commerce, and a Major in Accountancy with high academic standing. Applicants lacking an appropriate pattern of undergraduate work will be required to complete successfully certain qualifying courses, as assigned by the Director of the diploma programme. For further details, refer to the Concordia University Graduate Studies calendar.

LA CORPORATION PROFESSIONNELLE DES COMPTABLES EN MANAGEMENT ACCRÉDITÉS DU QUÉBEC: Certified Management Accountant (CMA)

Students who wish to follow the CMA programme must register with La Corporation professionnelle des comptables en management du Québec, 555, boulevard René-Lévesque, Suite 724, Montréal, Québec H2Z 1B1, Tel: 875-8621. A table of courses equivalencies for CMA and Concordia courses is shown below.

CMA Courses	Concordia University Courses
111 Principles of Accounting	ACCOUNTANCY 213 Financial I
122 Commercial Law	MANAGEMENT 475 Business Law I MANAGEMENT 476 Business Law II
123 Organizational Behaviour	MANAGEMENT 340 Organizational Behaviour
212 Economics	ECONOMICS 201 Intro to Microeconomics ECONOMICS 203 Intro to Macroeconomics
214 Computerized Information Systems	COMPUTER SCIENCE 201 Introduction to Computers and Computing *OR* DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 222 Introduction to Management Information Systems
229 Intermediate Accounting I	ACCOUNTANCY 323 Intermediate I ACCOUNTANCY 326 Intermediate II
241 Management Accounting I	ACCOUNTANCY 218 Managerial I
324 Taxation	ACCOUNTANCY 441 Taxation I ACCOUNTANCY 442 Taxation II
332 Quantitative Methods	DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 243 Introduction to Business Statistics and Decision Models DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 244 Introduction to Statistical Analysis for Business and Administration
339 Intermediate Accounting II	ACCOUNTANCY 323 Intermediate I ACCOUNTANCY 326 Intermediate II

341	Management Accounting II	ACCOUNTANCY 303 Cost and Management Accounting
441	Management Accounting III	DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 313 Managerial Operations Research DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 314 Operations Research and Production Systems *OR* DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 315 (for students admitted to the University effective June 1, 1986) *OR* DECISION SCIENCES AND MANAGEMENT INFORMATION SYSTEMS 250 Introduction to Production/Operations Management (for students admitted to the University effective June 1, 1989)
442	Financial Management	FINANCE 214 Introduction to Finance I FINANCE 315 Introduction to Finance II
451	Accounting Information Systems	ACCOUNTANCY 414 Accounting Information Systems
452	Internal Auditing	ACCOUNTANCY 429 Analytical Auditing
541	Advanced Management Accounting	ACCOUNTANCY 422 Cost and Management Accounting (Advanced) ACCOUNTANCY 470 Special Topics in Accounting (Note 3)
543	Advanced Financial Accounting	ACCOUNTANCY 335 Advanced (Note 3)
553	Management: Processes	MANAGEMENT 460 Business Policy I ACCOUNTANCY 470 Special Topics in Accounting (Note 3)

NOTES:

1. This equivalence table is subject to amendment by the Corporation.

2. A minimum grade of C (65%) is required to obtain an exemption from the Corporation for any of the CMA's Level 3, 4, and 5 courses. Students taking university courses must satisfy the necessary prerequisite courses.

3. The Final Accreditation Examinations of the Society of Management Accountants of Canada are mandatory. Coaching seminars for these courses are encouraged prior to writing the Final Accreditation Examinations. A student may not sit for these Examinations until all other Corporation courses or their equivalents have been successfully completed.

4. Students completing the Bachelor of Commerce degree programme with the following sequence of courses will be eligible to write the entrance exam, leading to the Professional Programme of the Corporation:

ACCO 323[3]; ACCO 326[3]; ACCO 335[3]; ACCO 303[3]; ACCO 422[3]; ACCO 470[3]; ACCO 414[3]; ACCO 429[3]; ACCO 441[3]; ACCO 442[3]

5. Prospective CMA students should note that the above sequence of exams is a prerequisite to the new CMA programme, which commences with an Entrance Examination (held in June each year). It is necessary to sit the Entrance Examination in order to take part in a 24 month Professional Programme. The Programme consists of work experience, independent study, group and residential sessions, together with a Final Examination. All candidates for the Entrance Examination must be registered student members of the Corporation.

PROFESSIONAL CORPORATION OF CERTIFIED GENERAL ACCOUNTANTS OF QUÉBEC: Certified General Accountant (CGA)

Students who wish to follow the CGA programme must register with the Professional Corporation of Certified General Accountants of Québec located at:

445 boulevard St-Laurent
Bureau 450
Montréal, Québec H2Y 2Y7
Telephone: 861-1823

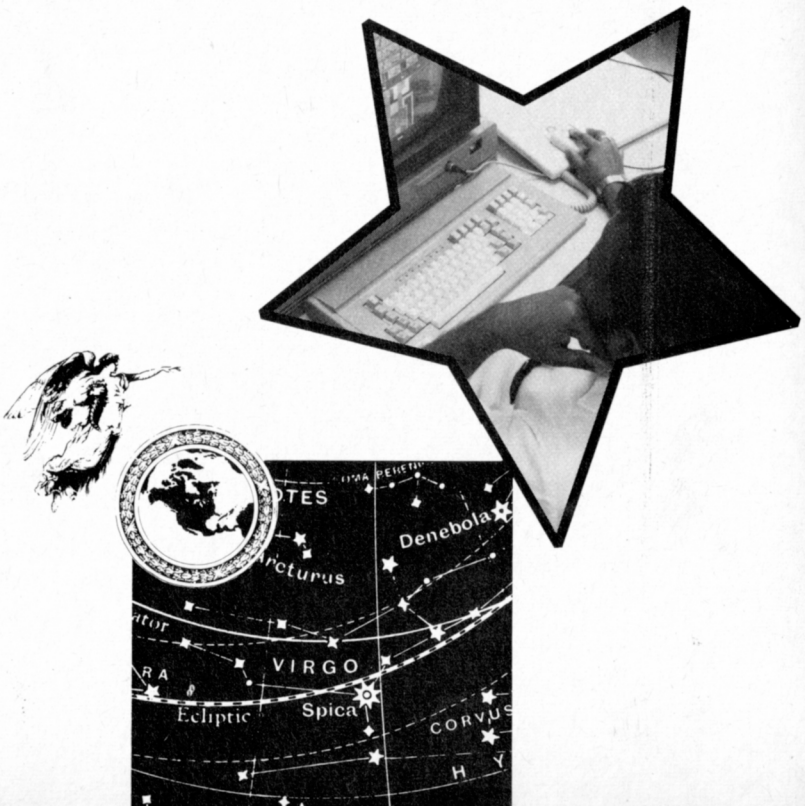
The list of courses comprising the CGA Academic Programme is shown below:

Accountancy 213	Introductory Financial Accounting
Accountancy 218	Introductory Managerial Accounting
Accountancy 323/326	Intermediate Accounting I and II
Accountancy 303	Cost and Management Accounting
Accountancy 414	Accounting Information Systems
Accountancy 441/442 (4)	Taxation I and II
Accountancy 335 (1)	Advanced Accounting
Accountancy 410 (1)	Specialized Accounting
Accountancy 461 (1)	Accounting Theory I
Accountancy 471 (4)	Seminar in Taxation
Accountancy 429/432 (2)	Auditing Concepts/Financial Auditing
Finance 214/315 (3)	Introduction to Finance I and II
Decision Science and Management	Introduction to Management
Information Systems 222	Information Systems
Decision Science and Management	Introduction to Business
Information Systems 243	Statistics & Decision Models
Decision Science and Management	Introduction to Statistical
Information Systems 244	Analysis for Business and Administration
Management 266	Foundations of Modern Management
Management 340	Organizational Behaviour
Management 475/478	Business Law I/Company Law
Economics 201/203	Introduction to Micro/Macro Economics

(1) Prerequisite to the Accounting 521 examination or Financial Accounting 4 (FA-4) examination
(2) Prerequisite to the Auditing 517 examination or Auditing 2 (AU-2) examination
(3) Prerequisite to the Finance 556 examination
(4) Prerequisite to the Taxation 509 examination
*(5) Prerequisite to the Auditing 587 examination**

NOTE: The listing above is subject to amendment. Please communicate with the programme coordinator.
NOTE: Registration as a Visiting Commerce student gives you priority in your choice of courses.
**Additional prerequisite courses for the Auditing 587 examination must be taken in another university.*

SECTION 71



FACULTY OF ENGINEERING AND COMPUTER SCIENCE

71.10 FACULTY OF ENGINEERING AND COMPUTER SCIENCE
- 71.10.1 Programmes Offered
- 71.10.2 Admission Requirements
- 71.10.3 Academic Regulations
- 71.10.4 Registration Regulations
- 71.10.5 Graduation Regulations
- 71.10.6 Availability of Programmes
- 71.10.7 Scheduling of Courses
- 71.10.8 The Co-operative Format

71.20 BACHELOR OF ENGINEERING
- 71.20.1 Curriculum for the Degree of Bachelor of Engineering
- 71.20.2 Extended Credit Programme
- 71.20.3 Accreditation by the Canadian Council of Professional Engineers
- 71.20.4 Membership in the Order of Engineers of Québec
- 71.20.5 Degree Requirements

71.30 CENTRE FOR BUILDING STUDIES
- 71.30.1 Course Requirements
- 71.30.2 The Co-operative Format

71.40 DEPARTMENT OF CIVIL ENGINEERING
- 71.40.1 Course Requirements

71.50 DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
- 71.50.1 Course Requirements (BEng in Electrical Engineering)
- 71.50.2 Course Requirements (BEng in Computer Engineering)

71.60 DEPARTMENT OF MECHANICAL ENGINEERING
- 71.60.1 Course Requirements (BEng in Mechanical Engineering)
- 71.60.2 Course Requirements (BEng in Industrial Engineering)

71.70 COURSE DESCRIPTIONS

71.80 DEPARTMENT OF COMPUTER SCIENCE
- 71.80.1 Curriculum for the Degree of Bachelor of Computer Science
- 71.80.2 Degree Requirements
- 71.80.3 Extended Credit Programme
- 71.80.4 Honours Programme
- 71.80.5 Minor in Computer Science
- 71.80.6 Programmes in Management Information Systems
- 71.80.7 The Co-operative Format

71.90 CERTIFICATE PROGRAMMES IN QUALITY CONTROL
- 71.90.1 Admission Requirements
- 71.90.2 Curriculum for the Certificate in Quality Control
- 71.90.3 Academic Regulations
- 71.90.4 Course Requirements

71 Faculty of Engineering and Computer Science

Dean
M.N.S. SWAMY

Associate Dean
TERRILL FANCOTT

Associate Dean
F. DOUGLAS HAMBLIN

Assistant Dean, Planning and Priorities
GEORGE D. XISTRIS

Director, Centre for Building Studies
PAUL P. FAZIO

Chair, Department of Civil Engineering
OSCAR A. PEKAU

Chair, Department of Electrical and Computer Engineering
PHOIVOS D. ZIOGAS

Chair, Department of Mechanical Engineering
M.O.M. OSMAN

Chair, Department of Computer Science
TIEN D. BUI

71.10 Faculty of Engineering and Computer Science

71.10.1 PROGRAMMES OFFERED

The following programmes are offered in the Faculty of Engineering:

1. Bachelor of Engineering degrees in Building*, Civil, Computer, Electrical, Industrial and Mechanical Engineering.
2. Bachelor of Computer Science degree.
3. Minor in Computer Science.
4. Certificate in Quality Control.

*The BEng degree in Building Engineering may be combined with a Master's degree in the same discipline.

The requirements for the programmes are different, and the appropriate section in the following pages must be consulted for each.

71.10.2 ADMISSION REQUIREMENTS

General Admission requirements are listed in §13.

In addition, the following specific requirements exist for the various programmes. Applicants should specify their choice of programme on their application.

Students entering the Faculty of Engineering and Computer Science are presumed to have acquired some familiarity with computers and programming, either through a course or through time spent working with a personal or other computer.

APPLICANTS FROM QUÉBEC INSTITUTIONS

Successful completion of a two-year pre-university CEGEP programme is required, including the specific courses in the appropriate profile, as follows:

1. **BEng (all programmes)**
   BCompSc (all options except Information Systems)

   CEGEP Profile 10.10
   Mathematics — 103, 105, and 203
   Physics — 101, 201 and 301
   Chemistry — 101 and 201
   Biology — 301

2. **CompSc (Information Systems Option)**
   Certificate in Quality Control
   Minor in Computer Science

   CEGEP Profile 10.12
   Mathematics — 103, 105 and 203

Applications from graduates of CEGEP technology programmes will also be considered. Programme requirements for successful applicants will be determined on an individual basis.

APPLICANTS FROM OUTSIDE QUÉBEC

Academic qualifications presented by students applying from institutions outside Québec should be comparable to those expected of students applying from within Québec.

Where the pre-university education is shorter than in Québec, students may be considered for admission to the first year of the Extended Credit Programme. (See §13.4.2 to 13.4.6, §71.20.2 and 71.80.3)

MATURE ENTRY

Admission requirements are listed in §14.

71.10.3 ACADEMIC REGULATIONS

Students should refer to the section presenting the Academic Regulations of the University, §16.

Definitions

Assessable courses: *All record entries of courses* listed in this Concordia calendar for which a grade point value is specified in §16.3.2.

However, any course which is a requirement for admission to a programme offered by the Faculty of Engineering and Computer Science will not be counted unless specifically listed on the student's admission letter.

Dean's office: Appropriate member of the Dean's office, normally, the Associate Dean.

Programme of Study: Course requirements in effect at the time of the latest admission or re-admission to a programme, for example, BEng (Civil) or BCompSc (General Science) or Certificate in Quality Control, including modifications on individual basis as specified or approved in writing by the Dean's Office, or the Student Request Committee of Faculty Council.
Grade Points: As defined in §16 of this calendar.
Weighted Grade Point Average (WGPA): As defined in §16 of this calendar. A grade obtained as a result of writing a supplemental examination and/or completing the work for a course graded INC or MED is included as part of the assessment period in which it is recorded.
Academic Year: A period of time which includes a Summer and its subsequent Fall and Winter terms.

Objectives

The objectives of these regulations are:
a) to ensure that the Faculty can certify that all of its graduates are qualified to enter their profession, and
b) to ensure that students can, with the assistance or intervention of the Faculty, assess themselves objectively, and plan programmes of study designed to meet their individual needs.

Grading System

See §16.3.2 for the Concordia grading system.
NOTE: Although a C- grade is designated as Satisfactory, a weighted grade point average of 2.00 is required for Acceptable Standing in the Faculty of Engineering and Computer Science.

Regulations

1. Students' standings are assessed at the end of each academic year providing they have registered for at least 12 credits subsequent to their previous assessment, or in the case of a first assessment, subsequent to their admission to a programme of study.
Standings of students who have attempted less than 12 credits since their last assessment are assessed as follows:
a) The standings of potential graduates are determined on the basis that these credits constitute an extension of the last assessment period.
b) The standings of other students are determined at the end of the academic year in which they have attempted a total of at least 12 credits since their last assessment.
2. Students' standings are determined according to the following criteria.

Acceptable Standing:
A WGPA of at least 2.00 for the assessment period.
Students in Acceptable Standing may proceed subject to the following conditions: any failing grade must be cleared by passing the supplemental examination, if one exists, and/or completing the work for the course or by repeating the failed course or in the case of an elective, by replacing the failed course by an alternative within the same group of electives. Any variation must be approved by the Dean's Office.

Conditional Standing:
A WGPA of at least 1.50 but less than 2.00 for the assessment period.
Students in Conditional Standing may not write supplemental examinations nor complete work graded incomplete but may proceed subject to the following conditions.
a) They must repeat successfully all courses in which failing grades were obtained, or replace them by alternatives approved by the appropriate member of the Dean's Office in consultation with the student's department.
b) They must repeat or replace by approved alternatives at least one-half of those courses in which they obtained grades in the "D" range. The specific courses to be repeated will be determined by the appropriate member of the Dean's Office in consultation with the student's department.
c) Courses to be taken may be specified by the Dean's Office. In no case will the number exceed five per term for full-time students and two per term for part-time students.
d) They must obtain Acceptable Standing at the time of their next assessment.

Failed Standing:
Failure to meet the criteria for Acceptable or Conditional Standings, or Conditional Standings over two consecutive assessments.
Failed students may not write supplemental examinations nor complete work graded incomplete: they are subject to the following regulations.
1. Failed students who are not subject to regulation 2 below may apply for readmission through the Dean's Office. If readmitted, they will be placed on academic probation. They must return to Acceptable Standing at the time of their next assessment. Other conditions will be determined at the time of readmission.
2. Failed students who were previously classed as failed students must withdraw from the University.

Availability of Supplemental Examinations

1. Supplemental examinations are available only to students in Acceptable Standing who have the F grade in a course for which such an examination is offered.
2. Except as specified in 4 below, or otherwise approved by the Faculty Council for individual courses, supplemental examinations are available in all 200- and 300-level courses offered by the Faculty.
3. Supplemental examinations are available in those 400-level courses offered by the Faculty for which:
a) it is required that a student pass the final examination as a condition for passing the course, or
b) the final examination contributes at least 50% of the mark producing the final grade for the course.
4. Supplemental examinations are not offered in Computer Science courses at the 200-level other than COMP 201 and COMP 212.

71.10.4 REGISTRATION REGULATIONS

1. Students (other than failed students) whose registration in the programme has lapsed for 30 consecutive months or more must apply to the Dean's Office in order to have their curriculum obligations re-evaluated as per paragraph 2 of §16.2.1 of this calendar. Permission to register will be granted only upon presentation of the results of this re-evaluation.
2. The maximum Regular Session course load for full-time students in the regular programmes

is three more than one-third of the total credits for their particular option as specified in subsequent sections.

3. The maximum Regular Session course load for full-time students in the Extended Credit and Mature Student programmes is 30 credits until they have completed all the courses required beyond those specified for their particular option in subsequent sections.

4. The Fall and Winter term course loads of full-time students may be unbalanced by up to three credits without permission; further differences between the two terms require the permission of the appropriate Associate Dean, or delegate.

5. Except for students registered for the co-operative format, the maximum load in a Summer Session is 8 credits, with no more than 4.5 credits in either of its terms.

71.10.5 GRADUATION REGULATIONS

Students must be in Acceptable Standing and satisfy the requirements specified for the academic programme in which they were admitted. The structure and courses of the programme may change in the period between admission and graduation due to curriculum development, but students remaining in Acceptable Standing are not required to complete more credits than were required at the time they were admitted.

71.10.6 AVAILABILITY OF PROGRAMMES

Full-time students in the Engineering programme will choose a 6- or 8-term sequence. Due to the heavy workload involved, 6-term sequences are only recommended for the exceptional student. In general, introductory level courses are offered in both Day and Evening. Subject to Registration Regulations in §71.10.4 above, a student may register on a part-time basis. Students may complete the first third of their programme at the Loyola Campus. They must transfer to the Sir George Williams Campus for the final two thirds. Further information on sequencing may be found in the Programme Guide issued by the Office of the Associate Dean.

71.10.7 SCHEDULING OF COURSES

A programme guide indicating course schedules for both the BEng and BCompSc programmes, including Mature Entry and Extended Credit programmes, and also for the Certificate in Quality Control, is available from the Associate Dean's Office.

71.10.8 THE CO-OPERATIVE FORMAT

A limited number of high ranking students entering the first year of the regular programme leading to the Bachelor of Computer Science degree and the Bachelor of Engineering degree in Building Engineering are permitted to undertake their studies in the co-operative format in conjunction with the Institute for Co-operative Education, see §23.

While the academic content is identical to that of the regular programmes, an annual WGPA of at least 3.00, with no failure in work term reports, is required for students to continue their studies in a co-operative format in the Faculty of Engineering and Computer Science.

For additional information, please refer to §23 and §71.30 (Building Engineering) or 71.80 (Computer Science).

71.20 Bachelor of Engineering

71.20.1 CURRICULUM FOR THE DEGREE OF BACHELOR OF ENGINEERING

The University offers programmes leading to the degree of Bachelor of Engineering in the fields of Building, Civil, Computer, Electrical, Industrial and Mechanical Engineering. Students enrolled in the BEng programme in Building Engineering may, after the completion of all but one of their 200 and 300 level courses, apply through the Associate Dean to enter a combined degree programme leading to the joint award of a Bachelor's and Master's degree in this field.

The BEng degree requires completion of a minimum of 115.5 to 118.5 credits depending on the programme chosen. Course requirements comprise a group of required courses with a group of elective courses which allow students to select part of their programme to provide some depth in an area of specialization according to their particular interests, or breadth in the general field of their chosen discipline.

Students may register for courses beyond the introductory (200) level only if they have completed, or will have completed in the current academic year, all the 200-level courses required for their programme. They must complete the requirements for their degree in a maximum of four academic years after that in which they first register for courses beyond the 200-level. Students failing to satisfy this requirement are withdrawn from the programme; they may be granted permission by the Dean's Office to continue in the programme for one additional year provided they are eligible to apply for re-admission according to the regulations in §71.10.3.

In their final undergraduate year, students with high standing may apply for permission through the Associate Dean's Office to register for a limited number of graduate courses offered by the Faculty in lieu of some courses in the undergraduate programme.

Successful completion of a BEng programme requires hard work and considerable dedication on the part of each student. Courses are presented with the expectation of an average of about two hours of "outside" work for each lecture hour and about one-half hour of "outside" work for each hour spent in the laboratory for all programmes of study.

71.20.2 EXTENDED CREDIT PROGRAMME

Students admitted to an extended credit programme under the provisions of §13.4.2 or 13.11 must successfully complete the requirements of a specific programme, as set out in §71.30 to 71.60, plus the following courses:

a) Building, Civil, Industrial and Mechanical Engineering:
MATH 202^3, 203^3, 204^3, 205^3
PHYS 204^3, 205^3, 224^1, 225^1

CHEM 205[3]
COMP 201[3]
Six credits chosen from courses in the humanities and social sciences.

b) Electrical and Computer Engineering:
The courses specified in a), plus PHYS 206[3]

71.20.3 ACCREDITATION BY THE CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS

The baccalaureate degree programmes in Civil, Building, Computer, Electrical, Industrial and Mechanical Engineering are accredited by the Canadian Engineering Accreditation Board of the Canadian Council of Professional Engineers. The Board has recommended to the Constituent Associations of CCPE that graduation from the above curricula be considered as sufficient academic qualification for purposes of registration in all Provinces and Territories in Canada.

71.20.4 MEMBERSHIP IN THE ORDER OF ENGINEERS OF QUÉBEC

The Ordre des Ingénieurs du Québec (O.I.Q.) has fully accredited the Bachelor of Engineering curricula in Building, Civil, Computer, Electrical and Mechanical Engineering, and will admit graduates of these five programmes as members according to the Engineers Act and the O.I.Q. By-Laws, providing applicants can complete the French language requirements. Industrial Engineering, which was an accredited option of the Mechanical Engineering curriculum until 1989-90, is now a separate Option of the Bachelor of Engineering degree and accreditation will be sought for it before students first graduate from it.
Québec law now requires that candidates seeking admission to provincially-recognized Québec professional corporations (such as the Ordre des ingénieurs du Québec) possess an appropriate knowledge of the French language.
Such knowledge is deemed appropriate when candidates can demonstrate either:

a) that they have had three years of schooling in the French language, on a full-time basis, at or above the secondary school level, **or**

b) that they have taken and passed **one of the following** courses at Secondary IV or V level: Français 412, 416, 422, 426, 432, 512, 522, 526, 532, 542, 552 (courses that have the same numbers and are entitled French are not acceptable).

Otherwise, the candidates must pass the test prescribed by the Office de la langue française. Information on this testing programme of the Office de la langue française may be obtained by writing to: Office de la langue française, 800 Place Victoria, 13e étage, C.P. 316, Montréal, Québec, H4Z 1G8, telephone: 873-8361.

71.20.5 DEGREE REQUIREMENTS

To be recommended for the degree of Bachelor of Engineering, students must satisfactorily complete the courses of the Engineering Core as well as those specified for their particular programme in subsequent sections in accordance with the graduation requirements in §71.10.5.

Engineering Core

EMAT 212(a)	Calculus and Differential Equations	3.00
EMAT 232(a)	Matrices and Advanced Calculus	3.00
EMAT 391	Numerical Methods in Engineering	3.00
ENCS 281(a)	Technical Writing	2.00
ENGR 212(a)	Technical Drawing	2.00
ENGR 273(a)	Basic Circuit Analysis	3.75
ENGR 371	Probability and Random Processes in Engineering	3.00
ENGR 402	Engineering Law	1.50
ENGR 410(b)	Technical Report	1.50
	Social Aspects of Engineering Electives	6.00
		28.75

Aspects of Engineering group(c):

ENGR 491	Engineers and Society	3.00
ENGR 492	Historical Impact of Technology on Society	3.00
ENGR 493	Engineering Resources and Environment	3.00
ENGR 494	Effect of Technology on the Person	3.00
ENGR 495	Technology Assessment and Control	3.00
ENGR 496	Science Policy and Engineering Innovation	3.00
ENGR 497	The Management of Transition to an Information Society	3.00

NOTES:
(a) Offered in both Day and Evening.
(b) To be submitted at the beginning of the academic year in which the student expects to graduate.
(c) Students in Building Engineering must successfully complete BLDG 481 as part of the 6 credit requirement. (For all students, 3 of these 6 credits may be replaced by a specified course or courses in French, or by other non-technical courses subject to the approval of the Associate Dean. A list of such courses is available from the Office of the Associate Dean.)

71.30 Centre for Building Studies

Director and Professor
PAUL P. FAZIO

Associate Director and Professor
THEODORE STATHOPOULOS

Professors
DOREL FELDMAN
CEDRIC MARSH

Associate Professors
CLAUDE BÉDARD
RAMY EL DIASTY
RICHARD W. GUY
H. KINH HA
OSAMA MOSELHI
JOSEPH C. WANG
RADU ZMEUREANU

Assistant Professors
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Research Assistant Professors
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R. BASU
DAVID CHEEKE
FRED H. ERNST
JEAN-CLAUDE HUOT
ADHAM KHALIL
M. PANCHOLY

Adjunct Associate Professors
AVTAR PALL
D. SETH

Building Engineering, as a discipline, encompasses the body of knowledge which pertains to all phases in the life-cycle of a constructed facility, namely conception, planning, design, construction, operation and disposal.

Concordia has developed a unique undergraduate programme leading to a BEng in Building Engineering designed to meet the needs of the construction industry for engineers familiar with the overall design of built facilities.

In addition to the basic engineering sciences, the programme emphasizes the fundamentals of building materials, structural analysis and design, building services (acoustical, heating, lighting, air conditioning), economics and project management. The student also has available certain electives which will be of use in the design of various phases of a building.

Students who complete all but one of their 200 and 300 level courses with a sufficiently high standing may apply through the Associate Dean, Academic Programmes to enter a combined programme leading to the joint award of both a BEng and an MEng degree in Building Engineering. It is expected that those who aspire to leadership roles within the building industry will enter such a combined programme. The combined programme requires a further 12 months of full-time study, after which graduates will not only have obtained further grounding in the basics, but will also have specialized in one of four branches: Building Science, Building Environment, Building Structures, Construction Management. For details of the Graduate Component, refer to the graduate calendar.

71.30.1 COURSE REQUIREMENTS

The programme in building engineering consists of the Engineering Core, the Building Engineering Core, and a further 12 elective credits chosen from a specified group of courses. The normal length of the programme is 116.50 credits.

Engineering Core (28.75 credits)

See §71.20.5. Note that students in the BEng (Bldg) programme must replace one of the required Social Aspects courses with BLDG 481.

Building Engineering Core

		Credits
EMAT 311	Transform Calculus and Partial Differential Equations	3.00
ENGR 213*	Descriptive Geometry	2.00
ENGR 242*	Statics	3.00
ENGR 243*	Dynamics	3.00
ENGR 244*	Mechanics of Materials	3.75
ENGR 251*	Thermodynamics I	3.00
ENGR 342	Structural Analysis I	2.00
ENGR 343	Structural Analysis II	3.00
ENGR 344	Structural Design I	3.00
ENGR 345	Structural Design II	3.00
ENGR 361	Fluid Mechanics I	3.00
ENGR 451	Construction Engineering	3.00
BLDG 341	Building Engineering Systems	3.00
BLDG 363	Building Science I	4.00
BLDG 364	Building Science II	4.00

BLDG 371	Building Service Systems	3.50
BLDG 401	Building Economics	3.00
BLDG 461	Building Enclosure Design	3.00
BLDG 471	HVAC System Design	4.00
BLDG 476	Thermal Analysis of Buildings	3.00
CIVI 271**	Surveying	3.00
CIVI 321	Engineering Materials	3.75
CIVI 431	Soil Mechanics	3.75
COMP 212*	FORTRAN for Engineers and Scientists	3.00
		75.75

* Offered in both Day and Evening.
** Summer school to be taken before entering second year of BEng programme.

Elective Courses
A student must choose a minimum of 12 credits from the following list of elective courses.

		Credits
ENGR 452	Matrix Analysis of Structures	3.00
ENGR 455	Introduction to Structural Dynamics	3.00
BLDG 459	Computer Aided Building Design	3.00
BLDG 462	Modern Building Materials	3.00
BLDG 465	Fire and Smoke Control in Buildings	3.00
BLDG 472	Building Energy Conservation Technologies	3.00
BLDG 473	Building Acoustics	3.00
BLDG 474	Building Illumination	3.00
BLDG 475	Indoor Air Quality	3.00
BLDG 491	Labour and Industrial Relations in Construction	3.00
BLDG 492	Construction Methods	3.00
BLDG 493	Legal Issues in Construction	3.00
CIVI 453	Design of Reinforced Concrete Structures	3.50
CIVI 454	Design of Steel Structures	3.50
CIVI 435	Foundation Design	3.50

71.30.2 THE CO-OPERATIVE FORMAT

Director
CEDRIC MARSH, *Professor*

Students entering the programme leading to the Bachelor of Engineering degree in Building Engineering may request permission to undertake their studies in the co-op format by following the application procedure specified in §23.

Academic content is identical to that of the regular programme, but seven study terms are interspersed with four work terms. Students in Building Engineering will complete between 15 and 18 credits in each study term to obtain the required 116.5 credits for a BEng (Building).

Each student is supervised personally and must meet the requirements specified by the Faculty of Engineering and Computer Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Building Engineering Co-op Committee, which includes the student's advisers.

Please refer to §23 for the schedule of study and work terms and the full description of admission requirements.

71.40 Department of Civil Engineering

Professor and Chair of the Department
OSCAR A. PEKAU

Professors
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Adjunct Assistant Professors
V. GOCEVSKI
P.K. SYAMAL
D.M. TRAN

Civil Engineering is primarily concerned with the creation of the complex systems of construction facilities for sound economic growth of the community. In a broad sense, civil engineers learn to control and modify the environment effectively so as to satisfy the needs and desires of society. Their responsibility for design ranges from foundations and superstructures of our common structures such as buildings, bridges, dams, tunnels, wharves, etc., to many unusual structures such as rocket installations, containment vessels for nuclear reactors, supports for radio telescopes, frameworks for aircraft. In addition, civil engineers are concerned with the engineering aspects of water resources, rivers, harbours, irrigation and drainage; with the disposal of wastes and the control of the quality of air and water; with highways, railroads, airports and other transportation facilities; with measuring, mapping and interpreting the physical conditions of the surface of the earth; and with planning metropolitan areas and conducting and managing their public facilities.

The programme is designed so that students, after having obtained grounding in the fundamentals of Civil Engineering, may specialize in one of two options.

71.40.1 COURSE REQUIREMENTS

The programme in Civil Engineering consists of the Engineering Core, the Civil Engineering Core, and one of the options described below. The normal length of the programme is 116.00 credits.

Engineering Core (28.75 credits)
See §71.20.5.

Civil Engineering Core

		Credits
EMAT 311	Transform Calculus and Partial Differential Equations	3.00
ENGR 213*	Descriptive Geometry	2.00
ENGR 242*	Statics	3.00
ENGR 243*	Dynamics	3.00
ENGR 244*	Mechanics of Materials	3.75
ENGR 251*	Thermodynamics I	3.00
ENGR 342	Structural Analysis I	2.00
ENGR 343	Structural Analysis II	3.00
ENGR 344	Structural Design I	3.00
ENGR 345	Structural Design II	3.00
ENGR 361	Fluid Mechanics I	3.00
ENGR 362	Fluid Mechanics II	3.75
ENGR 401	Engineering Economics and Management Principles	1.50
ENGR 451	Construction Engineering	3.00
CIVI 231*	Geology	2.75
CIVI 271**	Surveying	3.00
CIVI 321	Engineering Materials	3.75
CIVI 341	Civil Engineering Systems	3.00
CIVI 372	Transportation Engineering	3.00
CIVI 381	Open Channel Hydraulics	3.50
CIVI 431	Soil Mechanics	3.75
CIVI 481	Water Supply Systems	3.50

COMP 212*	FORTRAN for Engineers and Scientists	3.00
		69.25

*Offered in both Day and Evening.
**Summer school to be taken before entering second year of study in the BEng programme.

Option Course Requirements
Students must have a minimum of 12 credits from one of Option A or Option B and 6 further elective credits from either option.

Option A

		Credits
ENGR 452	Matrix Analysis of Structures	3.00
ENGR 455	Introduction to Structural Dynamics	3.00
CIVI 434	Geotechnical Analysis	3.00
CIVI 435	Foundation Design	3.50
CIVI 436	Mechanics of Geotechnical Materials	3.00
CIVI 451	Advanced Structural Analysis	3.50
CIVI 453	Design of Reinforced Concrete Structures	3.50
CIVI 454	Design of Steel Structures	3.50
CIVI 461	Continuum Mechanics	3.00

Option B

CIVI 441	Civil Engineering Systems Analysis	3.00
CIVI 471	Highway Design	4.50
CIVI 472	Traffic Engineering	3.00
CIVI 474	Urban Transportation Planning	3.00
CIVI 482	Urban Sanitation	3.50
CIVI 483	Hydrology	3.50
CIVI 484	Hydraulic Engineering	3.50
CIVI 485	Hydraulic Structures	3.50
CIVI 486	Hydraulic Machinery	3.00
CIVI 487	Environmental Engineering	3.50
CIVI 488	Water Quality	3.00
CIVI 489	Computational Hydraulics	3.50

71.50 Department of Electrical and Computer Engineering

Professor and Chair of the Department
PHOIVOS D. ZIOGAS

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JEREMIAH F. HAYES
STANLEY J. KUBINA
JAMES F. LINDSAY
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MUMTAZ GAWARGY
SON LE-NGOC
SHANTNU R. MISHRA
VIJAY K. SOOD

Adjunct Assistant Professors
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ALI GRAMI
M.H. KHAN
S. MANIAS
PRADEEP MISRA

Visiting Assistant Professor
ROBERT PAKNYS

The Department of Electrical and Computer Engineering offers two distinct programmes, one of which leads to the Bachelor of Engineering in **Electrical Engineering,** the other to the Bachelor of Engineering in **Computer Engineering.**

Electrical Engineering is concerned primarily with energy and information: their conversion, transformation and transmission in the most efficient, convenient and reliable manner. Computer Engineering, on the other hand, focuses more directly on the design and use of computer technology for information processing.

Computer and electrical engineers are involved in the processing and transmission of information. The revolution in electronics which began some forty years ago with the invention of the transistor, and which continues today through the advent of the microprocessor, has had a profound impact not only on our capability to communicate with each other or to store masses of easily retrievable information about ourselves, but also on our ability to construct "intelligent" machines. This production both of new devices, and of sophisticated applications for these devices (for example in bio-medical engineering) continues apace. While contributing to what has been, and will continue to be, a major transformation in the structure of our society, electrical and computer engineers may, in the course of their careers, be engaged in a variety of activities: research, development, design, manufacture, operation, maintenance, control, and marketing of devices and systems. In so doing, they will be called upon to assist or direct the efforts of other engineers, individuals or groups of people of widely varying backgrounds and abilities.

Electrical engineers are also involved in the conversion of energy from its original mechanical, thermal, nuclear, wind or solar form to electricity. They have primary responsibility for the design and control of continent spanning power grids which are used to transport this energy from generating stations to the consumer, as well as for designing efficient converters which will transform this energy back into forms which meet the needs of the user for heat, refrigeration, light, electromechanical devices of all types, and for the running of a host of electronic communications and data processing systems.

Therefore, electrical and computer engineers must receive a professional education of great breadth and depth. Great emphasis is placed at Concordia on giving the student a solid foundation in mathematics, electrical and computer engineering fundamentals and design techniques so that they will be equipped both to contribute and to respond to a rapidly evolving technology. Of equal importance, though much less time is devoted to it in the curriculum, is the fostering of

an awareness of the interaction of the profession and the society it serves, and of the ability to communicate effectively both with colleagues and with fellow citizens.

71.50.1 COURSE REQUIREMENTS (BENG IN ELECTRICAL ENGINEERING)

The programme in Electrical Engineering consists of the Engineering Core, the Electrical Engineering Core shown below, and one of three elective options. The normal length of the programme is 115.50 credits.

Engineering Core (28.75 credits)

See §71.20.5.

Electrical Engineering Core

		Credits
EMAT 252	Complex Variables	3.00
EMAT 312	Laplace Transforms and Advanced Differential Equations	3.00
ENCS 245*	Introduction to Mechanical Analysis	3.00
ENGR 274*	Modelling and Analysis of Physical Systems	3.75
ENGR 372	Fundamentals of Control Systems	3.75
ENGR 401	Engineering Economics and Management Principles	1.50
COEN 311	Computer Organization and Software	3.00
COEN 312	Digital Systems Design	3.75
ELEC 251*	Fundamentals of Applied Electromagnetics	3.00
ELEC 311	Electronics I	4.50
ELEC 312	Electronics II	4.50
ELEC 321	Electrical Properties of Materials	3.00
ELEC 331	Electromechanics	3.75
ELEC 341	Linear Network Analysis	3.00
ELEC 351	Electromagnetic Waves and Guiding Structures	3.00
ELEC 401	Electrical Engineering Seminar	1.00
ELEC 461	Communication Circuits and Systems	3.75
COMP 212*	FORTRAN for Engineers and Scientists	3.00
		57.25

*Offered in both day and evening.

Technical Electives

Programme Requirements include the completion of one of three options.

Students may replace one course from within their option by a technical elective from another electrical engineering option. No special permission is required.

1. Electronics/Communications Option

Students must complete a minimum of 29.50 credits from:

		Credits
ENCS 454	Introduction to VLSI	4.00
ENCS 456	VLSI Technology	3.00
ENGR 471	Linear Systems	3.75
ENGR 472	System Optimization	3.75
COEN 231	Introduction to Discrete Mathematics	3.00
COEN 412	Digital Electronics	3.75
COEN 414	Sequential Circuits	3.75
COEN 417	Microprocessor Systems	4.50
ELEC 411	Pulse and Waveform Generation	3.75
ELEC 421	Solid State Devices	3.75
ELEC 422	Design of Integrated Circuit Components	3.75
ELEC 454	Modern Filter Design	3.75
ELEC 442	Digital Signal Processing	3.75
ELEC 453	Microwaves and Optics: Transmission	3.75
ELEC 454	Microwaves and Optics: Circuits	3.75
ELEC 455	Acoustics	3.00
ELEC 462	Statistical and Digital Communications	3.75
ELEC 463	Telecommunication Networks	3.00
ELEC 481	Electrical Engineering Project	4.00
ELEC 498	Topics in Electrical Engineering	3.00
COMP 291	Language Laboratory Pascal	1.00

2. Power Option

Students must complete:

		Credits
ELEC 431	Electrical Power Systems	3.75
ELEC 432	Control of Electric Power Conversion Systems	3.75
ELEC 433	Static Power Converters	3.75

Students must also choose a minimum of 18.25 credits from:

		Credits
ENGR 471	Linear Systems	3.75
ENGR 472	System Optimization	3.75
ENGR 473	Control System Design	3.75
COEN 412	Digital Electronics	3.75
COEN 414	Sequential Circuits	3.75
COEN 417	Microprocessor Systems	4.50
ELEC 481	Electrical Engineering Project	4.00
ELEC 498	Topics in Electrical Engineering	3.00
COMP 291	Language Laboratory — Pascal	1.00

3. Systems Option

Students must complete:

		Credits
ENGR 471	Linear Systems	3.75
ENGR 472	System Optimization	3.75

Students must also choose a minimum of 22.00 credits from:

		Credits
ENCS 472	Robot Manipulators	3.75
ENGR 473	Control System Design	3.75
COEN 412	Digital Electronics	3.75
COEN 414	Sequential Circuits	3.75
COEN 417	Microprocessor Systems	4.50
ELEC 431	Electrical Power Engineering	3.75
ELEC 432	Control of Electric Power Conversion Systems	3.75
ELEC 442	Digital Signal Processing	3.75
ELEC 462	Statistical and Digital Communications	3.75
ELEC 481	Electrical Engineering Project	4.00
ELEC 498	Topics in Electrical Engineering	3.00
COMP 291	Language Laboratory — Pascal	1.00

71.50.2 COURSE REQUIREMENTS (BENG IN COMPUTER ENGINEERING)

The programme in Computer Engineering consists of the Engineering Core, the Computer Engineering Core, and a minimum of 9.00 elective credits chosen from a specified group of courses. The normal length of the programme is 117.50 credits.

Engineering Core: (28.75 credits)
See §71.20.5

Computer Engineering Core

		Credits
EMAT 252	Complex Variables	3.00
EMAT 312	Laplace Transforms and Advanced Differential Equations	3.00
ENGR 274*	Modelling and Analysis of Physical Systems	3.75
ENGR 372	Fundamentals of Control Systems	3.75
ENGR 401	Engineering Economics and Management Principles	1.50
COEN 231**	Introduction to Discrete Mathematics	3.00
COEN 311	Computer Organization and Software	3.00
COEN 312	Digital Systems Design	3.75
COEN 412	Digital Electronics	3.75
COEN 414	Sequential Circuits	3.75
COEN 416	Computer Architecture and Design	3.00
COEN 417	Microprocessor Systems	4.50
COEN 418	Real-Time System Design	4.50
COEN 431	Software Engineering	3.75
ELEC 311	Electronics I	4.50
ELEC 312	Electronics II	4.50
ELEC 341	Linear Network Analysis	3.00
ELEC 353	Basic Electromagnetics and Transmission Line Theory	3.00
ELEC 401	Electrical Engineering Seminar	1.00
ELEC 461	Communication Circuits and Systems	3.75
COMP 244*	Programming Methodology	3.00
COMP 291*	Language Laboratory — Pascal	1.00
COMP 293*	Language Laboratory — FORTRAN	1.00
COMP 346	Operating Systems	4.00
COMP 352*	Data Structures and Algorithms	3.00
		79.75

*Offered in both Day and Evening.

**COMP 231 allowed as substitute.

Computer Engineering Electives (Minimum of 9.00 credits)

		Credits
ENCS 245	Introduction to Mechanical Analysis	3.00
ENCS 454	Introduction to VLSI	4.00
ENCS 455	Introduction to VLSI Architecture	4.00
ENCS 456	VLSI Technology	3.00
ENCS 471	Robotics	3.00
ENCS 472	Robot Manipulators	3.75
ENGR 471	Linear Systems	3.75
COEN 481	Computer Engineering Project	4.00
COEN 498	Topics in Computer Engineering	3.00
ELEC 442	Digital Signal Processing	3.75
ELEC 462	Statistical and Digital Communications	3.75
ELEC 463	Telecommunication Networks	3.00
COMP 294	Language Laboratory — LISP	1.00
COMP 335	Introduction to Theoretical Computer Science	3.00
COMP 353	Files and Databases	3.00
COMP 442	Compiler Design	3.00
COMP 451	Database Design	3.00
COMP 471	Computer Graphics	3.75
COMP 472	Introduction to Artificial Intelligence	3.00
COMP 473	Pattern Recognition	3.00
COMP 474	Introduction to Expert Systems	3.00

71.60 Department of Mechanical Engineering

Professor and Chair of the Department
M.O.M. OSMAN

Professors
R.B. BHAT
RICHARD M.H. CHENG
W.G. HABASHI
V. SUONG HOA
C.K. KWOK
SUI LIN
HUGH J. MCQUEEN
SESHADRI SANKAR
T.S. SANKAR

Associate Professors
G.H. ABDOU
ADOLF E. BLACH
F. DOUGLAS HAMBLIN
KALMAN I. KRAKOW
TADEUS H. KREPEC
RAFIK A. NEEMEH
A.J. SABER
J. SVOBODA
GEORGIOS H. VATISTAS
GEORGE D. XISTRIS

Assistant Professors
W. BLACH
AKIF A. BULGAK
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AHMAD HEMAMI
VOJISLAV LATINOVIC

Research Associate Professors
V.I. FABRIKANT
SUBHASH RAKHEJA

Research Assistant Professors
A.K. WAIZUDDIN AHMED
EUGENE THIMMHARDY

Adjunct Professors
RAO V. DUKKIPATI
SINH LE QUOC

Adjunct Associate Professors
M. HELMI ATTIA
VIRENDRA JHA
DAVID P. KENNY
M.J. RICHARD
STEVEN ROBBINS

Adjunct Assistant Professors
S. ARUMUGAN
G. BUSH
XAVIER CYRIL
W.M. LUCKING
THAI T. LUONG
G.A. WAGNER

The Department of Mechanical Engineering offers two distinct programmes, one of which leads to the Bachelor of Engineering in **Mechanical Engineering**, the other to the Bachelor of Engineering in **Industrial Engineering**.

As in all branches of professional engineering, mechanical engineers are concerned with the creation of devices, systems, structures, and processes for human use. Their task is to apply scientific, mathematical, economic and social knowledge to satisfy specific needs. The services required of mechanical engineers encompass a very wide range of professional activity, such as design, research, development and management carried out in environments of equally diverse nature, such as industry, medicine, private practice, university and government.

Representative fields of endeavour for mechanical engineers include all forms of power generating equipment (hydro-electric, steam, internal combustion, nuclear, jet rocket, fuel cells), the design of mechanisms and machines, transportation systems, controls and automation, vibration analysis, environmental control (heating, ventilation and refrigeration), materials handling and precision measurement.

Any of the specific fields may involve the design, construction and control of machines and equipment as well as the research and development of new processes, materials and techniques.

In view of the very wide range of activities in the field, the mechanical engineering curriculum consists of a combination of core courses with a series of technical electives. Strong emphasis is given to building on the principles presented in the basic engineering science and physical systems courses of the Engineering Core. Further core courses are taken by all mechanical engineering undergraduates and deal with topics basic to the field, including thermodynamics, fluid mechanics, machine design and metallurgy. Technical electives allow students to obtain some specialization in a particular area of the field, depending on their interests and expected future professional activity. Three options are available in **Thermo Fluid and Propulsion Engineering** (Option A), **Design and Production Engineering** (Option B), and in **Automation and Control Systems** (Option C).

Industrial Engineering can be defined as "the design, organization, analysis and integration of people and industrial systems components for the purposes of achieving or enhancing industrial effectiveness". These components include whole machines, transportation and conveyance elements, physical plants, organizational frameworks, schedules and budgets.

Distinguishing industrial engineers from other classical branches of engineering is the attention

to, and synthesis of, the role of people in the design and analysis of engineering systems. The Industrial Engineering curriculum is therefore designed to give students the background needed to define and solve problems related to the conception or improvement and implementation of integrated industrial systems involving people, materials and money.

71.60.1 COURSE REQUIREMENTS (BEng in Mechanical Engineering)

The programme in Mechanical Engineering consists of the Engineering Core, the Mechanical Engineering Core and Option Requirements as shown below. The normal length of the programme is 117.75 credits.

Engineering Core (28.75 credits)
See §71.20.5

Mechanical Engineering Core

		Credits
EMAT 311	Transform Calculus and Partial Differential Equations	3.00
ENGR 213*	Descriptive Geometry	2.00
ENGR 242*	Statics	3.00
ENGR 243*	Dynamics	3.00
ENGR 244*	Mechanics of Materials	3.75
ENGR 251*	Thermodynamics I	3.00
ENGR 274*	Modelling and Analysis of Physical Systems	3.75
ENGR 361	Fluid Mechanics I	3.00
ENGR 362	Fluid Mechanics II	3.75
ENGR 372	Fundamentals of Control Systems	3.75
ENGR 401	Engineering Economics and Management Principles	1.50
ELEC 318	Industrial Electronics	3.75
MECH 221*	Materials Science	2.00
MECH 311	Manufacturing Processes	2.50
MECH 313	Machine Drawing & Design	3.00
MECH 321	Properties and Failure of Materials	3.00
MECH 341	Kinematics of Mechanisms	2.50
MECH 342	Dynamics of Machines	2.50
MECH 351	Thermodynamics II	3.75
MECH 352	Heat Transfer I	3.75
MECH 373	Instrumentation and Measurements	3.75
MECH 411	Design & Analysis of Mechanical Components	2.50
MECH 441	Mechanical Engineering Design	3.00
COMP 212*	FORTRAN for Engineers and Scientists	3.00
		72.50

*Offered in both day and evening.

Option Requirements

Students in the Mechanical Engineering programme must complete 16.50 elective credits in either option A, B or C. Prior to registering for courses in one of these option cores, students must indicate to the Department Chair their choice of option. This choice is to be noted on a form available from the Department and submitted to the Chair's office for approval *prior to March 15th.*

1. Option A — Thermo Fluid and Propulsion

Students must complete a minimum of 16.50 credits from the following courses, including at least two of the courses marked *.

		Credits
ENGR 473	Control System Design	3.75
ENGR 475	Process Dynamics and Control	3.75
ELEC 334	Electric Machinery	3.75
MECH 421	Mechanical Shaping of Metals, Plastics and Composites	3.75
MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 423	Casting, Welding, Heat Treatment, and Non-Destructive Testing	3.75
MECH 443	Mechanical Vibrations	3.75
MECH 446	Process Equipment Design	3.00
MECH 452*	Heat Transfer II	3.75
MECH 453	Heating, Ventilation and Air Conditioning Systems	3.00
MECH 461*	Gas Dynamics	3.75
MECH 462*	Turbomachinery and Propulsion	3.00
MECH 464	Aerodynamics	3.00
MECH 465	Gas Turbine Design	3.75
MECH 471	Microprocessors and Applications	3.75
MECH 481	Design or Experimental Project	3.00
MECH 498	Topics in Mechanical Engineering	3.00

2. Option B — Design and Production

Students must complete a minimum of 16.50 credits from the following courses, including at least two of the courses marked *.

		Credits
ENGR 473	Control System Design	3.75
ELEC 334	Electric Machinery	3.75
INDU 323	Industrial Operations Research	3.00
INDU 411	Computer Integrated Manufacture and Assembly	3.75
MECH 412*	Computer Aided Mechanical Design	3.75
MECH 421*	Mechanical Shaping of Metals, Plastics and Composites	3.75

MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 423	Casting, Welding, Heat Treating, and Non-Destructive Testing	3.75
MECH 443	Mechanical Vibrations	3.75
MECH 445*	Machine Design	3.50
MECH 446	Process Equipment Design	3.00
MECH 447	Fundamentals of Vehicle Systems	3.00
MECH 453	Heating, Ventilation and Air Conditioning Systems	3.00
MECH 463	Fluid Power Control	3.75
MECH 471	Microprocessors and Applications	3.75
MECH 481	Design or Experimental Project	3.00
MECH 498	Topics in Mechanical Engineering	3.00

3. Option C — Automation and Control Systems

Students must complete a minimum of 16.50 credits from the following courses, including at least two of the courses marked *.

		Credits
ENGR 471	Linear Systems	3.75
ENGR 472	System Optimization	3.75
ENGR 473*	Control System Design	3.75
ENGR 475	Process Dynamics and Control	3.75
ELEC 334	Electric Machinery	3.75
INDU 323	Industrial Operations Research	3.00
MECH 422	Mechanical Behaviour of Polymer Composite Materials	3.00
MECH 443	Mechanical Vibrations	3.75
MECH 446	Process Equipment Design	3.00
MECH 447	Fundamentals of Vehicle Systems	3.00
MECH 453	Heating, Ventilation and Air Conditioning Systems	3.00
MECH 463*	Fluid Power Control	3.75
MECH 471*	Microprocessors and Applications	3.75
MECH 481	Design or Experimental Project	3.00
MECH 498	Topics in Mechanical Engineering	3.00

71.60.2 COURSE REQUIREMENTS (BEng in Industrial Engineering)

The programme in Industrial Engineering consists of the Engineering Core, the Industrial Engineering Core and six elective credits as shown below. The normal length of the programme is 118.5 credits.

Engineering Core (28.75 credits)
See §71.20.5

Industrial Engineering Core

		Credits
EMAT 311	Transform Calculus and Partial Differential Equations	3.00
ENGR 213*	Descriptive Geometry	2.00
ENGR 242*	Statics	3.00
ENGR 243*	Dynamics	3.00
ENGR 244*	Mechanics of Materials	3.75
ENGR 251*	Thermodynamics I	3.00
ENGR 274*	Modelling and Analysis of Physical Systems	3.75
ENGR 361	Fluid Mechanics I	3.00
ENGR 372	Fundamentals of Control Systems	3.75
ACCO 213*	Introductory Financial Accounting	3.00
COEN 311	Computer Organization and Software	3.00
ELEC 318	Industrial Electronics	3.75
INDU 313	Industrial Economics	3.00
INDU 320	Production Engineering I	3.00
INDU 321	Production Engineering II	3.00
INDU 323	Industrial Operations Research	3.00
INDU 330	Organizational Management	3.00
INDU 371	Advanced Probability and Statistics	3.00
INDU 411	Computer Integrated Manufacture and Assembly	3.75
INDU 412	Human Factor Engineering	3.00
INDU 480	Industrial Engineering Project	3.00
INDU 481	Industrial Engineering Seminar	0.50
MECH 221*	Materials Science	2.00
MECH 311	Manufacturing Processes	2.50
MECH 313	Machine Drawing & Design	3.00
MECH 373	Instrumentation and Measurements	3.75
MECH 411	Design & Analysis of Mechanical Components	2.50
COMP 212*	FORTRAN for Engineers and Scientists	3.00
		83.00

*Offered in both day and evening.

Electives

Students must complete a minimum of 6.75 further credits from the following courses.

		Credits
ELEC 334	Electric Machinery	3.75
INDU 410	Safety Engineering	3.00
INDU 423	Inventory Control	3.00

71.70 Course Descriptions

For equivalent course numbers under the old system, please consult the 1981-82 Undergraduate Calendar. Students who have taken a given course under an old number may not repeat it for credit under an equivalent number.

Engineering Mathematics

EMAT 212 ***Calculus and Differential Equations*** (3 credits)
Prerequisite: MATH 204 (CEGEP Mathematics 105) previously or concurrently; MATH 205 (CEGEP Mathematics 203). Introduction to ordinary differential equations, with applications to engineering problems. Functions of several variables: differentiation and multiple integrals. Lectures: 3 hours per week. Tutorials: 2 hours per week.

EMAT 232 ***Matrices and Advanced Calculus*** (3 credits)
Prerequisite: EMAT 212 previously or concurrently. Review of matrix algebra; solution of systems of linear differential equations with examples drawn from physical systems; vector spaces, characteristic value problems, Cayley-Hamilton theorem with applications. Vector calculus: Gradient, Divergence, Curl, Green's Theorem. Divergence Theorem, Stokes Theorem. Lectures: 3 hours per week. Tutorials: 2 hours per week.

EMAT 252 ***Complex Variables*** (3 credits)
Prerequisite: EMAT 212; EMAT 232 previously or concurrently. Algebra of complex numbers in Cartesian and polar forms; functions and inverse functions of complex variables. Derivatives and Cauchy-Riemann, analytic and harmonic functions. Exponential, trigonometric, hyperbolic and logarithmic functions. Complex line integrals, Cauchy-Goursat theorem, Cauchy integral formula. Taylor's and Laurent's series. Residue theorem and applications. Lectures: 3 hours per week.

EMAT 271 ***Applied Probability and Statistics*** (3 credits)
Prerequisite: MATH 205 (CEGEP Mathematics 203). Elementary probability theory. Binomial, normal and Poisson distribution. Sampling and decision theory. Curve fitting. Correlation theory. Applications to the analysis of experimental results. Factorial plans. Lectures: 3 hours per week. *NOTE See §200.7*

EMAT 272 ***Advanced Probability and Statistics*** (3 credits)
Prerequisite: EMAT 271. Time series analysis, regression and correlation analysis, forecasting and smoothing techniques. Extreme value statistics, Monte Carlo simulation, reliability analysis. Applications to general engineering and industrial engineering problems. Lectures: 3 hours per week.

EMAT 311 ***Transform Calculus and Partial Differential Equations*** (3 credits)
Prerequisite: EMAT 232. Elements of complex variables. The Laplace transform: Laplace transforms and their properties, solution of linear differential equations with constant coefficients. Further theorems and their applications. The Fourier transform: orthogonal functions, expansion of a function in orthogonal functions, the Fourier series, the Fourier integral, the Fourier transform, the convolution theorem. Partial differential equations: physical foundations of partial differential equations, introduction to boundary value problems. Lectures: 3 hours per week.

EMAT 312 ***Laplace Transforms and Advanced Differential Equations*** (3 credits)
Prerequisite: EMAT 232; EMAT 252. The Laplace Transform, its inverse and properties. Laplace Transform of periodic functions. Applications to solution of linear differential equations with constant coefficients. Orthogonal functions, Fourier series, Fourier Transform. The convolution theorem. Properties of special functions (e.g. Bessel, Legendre). Partial differential equations and introduction to boundary value problems. The Sturm Liouville problem. Lectures: 3 hours per week.

EMAT 391 ***Numerical Methods in Engineering*** (3 credits)
Prerequisite: EMAT 232; COMP 212 or COMP 293. Roots of algebraic and transcendental equations; function approximation; numerical differentiation; numerical integration; solution of simultaneous algebraic equations; numerical integration of ordinary differential equations. Lectures: 3 hours per week. Tutorials: 1 hour per week.

Engineering and Computer Science

ENCS 245 ***Mechanical Analysis*** (3 credits)
Prerequisite: PHYS 204 and PHYS 224 (CEGEP Physics 101); EMAT 212 previously or concurrently. Forces in a plane and in space, moments of forces, Varignon's theorem, rigid bodies in equilibrium,

free-body diagram. Centroids, centres of gravity. Distributed forces, moments of inertia. Principle of virtual work. Kinematics of particles and rigid bodies. Forces and accelerations; work and energy; impulse and momentum. Kinetics of particles and rigid bodies. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENCS 281 ***Technical Writing*** (2 credits)
Technical writing form and style. Technical and scientific papers, abstracts, reports. Library research and referencing methods. Business communication. Lectures: 2 hours per week.

ENCS 454 ***Introduction to VLSI*** (3 credits)
Prerequisite: COMP 325 or COEN 414. Review of IC development and realization of logic elements. CMOS inverter, logic levels, power and speed considerations, area of implementation. Electrical analysis using SPICE, input, output, delay time and loading. CMOS NAND/NOR gates, fan-out limitations and layout considerations. Simple CMOS process, design rules and layout exercises. CMOS logic system design and analysis using SPLICE. Logic simulation and testing specification of input, output and delay for fault simulation. Other CAD facilities for logic simulation and testing. Gate arrays and semicustom CMOS design considerations. CMOS dynamic VLSI circuits; CMOS memories. NMOS dynamic and static circuit design; NMOS memories. Hierarchical approach to digital design of VLSI circuits. Lectures: 3 hours per week. Laboratory: 2 hours per week.

ENCS 455 ***Introduction to VLSI Architecture*** (3 credits)
Prerequisite: COMP 325 and COMP 326 or COEN 416 previously or concurrently. Introduction to VLSI technology. Synchronous system design. Computational structures and algorithms. Applications of VLSI to problem solving. Lectures: 3 hours per week. Laboratory: 2 hours per week.

ENCS 456 ***VLSI Technology*** (3 credits)
Prerequisite: ELEC 312 previously or concurrently. Introduction to basic VLSI technologies such as crystal growth, epitaxy, dielectric and polysilicon film deposition, diffusion, ion implantation, lithography, metallization, VLSI process integration, assembly techniques and packaging, yield and reliability. Lectures: 3 hours per week.

ENCS 471 ***Algorithmic Aspects of Robotics*** (3 credits)
Prerequisite: COMP 224 and COMP 285, or COEN 411; COMP 352. Robot perception. Task planning. Kinematics. algorithmic aspects. Lectures: 3 hours per week.

ENCS 472 ***Robot Manipulators*** (3.75 credits)
Prerequisite: ENCS 245; ENGR 274. Spatial descriptions and transformations. Manipulator forward and inverse kinematics. Jacobians: velocities and static forces. Manipulator dynamics. Trajectory generation. Position control of manipulators. Force control of manipulators. Robot programming languages. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

Engineering

ENGR 212 ***Technical Drawing*** (2 credits)
Lettering, instruments, drawing practices; orthographic projections; pictorial views; isometric views, perspectives, sectional views, auxiliary views; dimensioning practices; working drawings: standard components, drawings of steel and concrete structures, mechanical and piping drawings, electrical and architectural drawings. Lectures: 2 hours per week. Tutorials: 2 hours per week.

ENGR 213 ***Descriptive Geometry*** (2 credits)
Prerequisite: ENGR 212. Spatial relationships of points, lines, planes, and solids. Application to pictorial representation of three-dimensional objects, intersections of planes and solids, developments, mapping and topographical problems. Lectures: 2 hours per week. Tutorial: 2 hours per week.

ENGR 242 ***Statics*** (3 credits)
Prerequisite: EMAT 212 previously or concurrently; PHYS 204 and PHYS 224 (CEGEP Physics 101); MATH 204 (CEGEP Mathematics 105). Resultant of force systems; equilibrium of particles and rigid bodies; distributed forces; statically determinate systems; trusses; friction; moments of inertia; virtual work. Shear and bending moment diagrams. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENGR 243 ***Dynamics*** (3 credits)
Prerequisite: EMAT 212; ENGR 242. Kinematics of a particle and rigid body; forces and accelerations; work and energy; impulse and momentum; dynamics of a system of particles and rigid bodies, introduction to vibrations. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENGR 244 ***Mechanics of Materials*** (3.75 credits)
Prerequisite: ENGR 242; EMAT 232 previously or concurrently. Mechanical behaviour of materials; stress; strain; shear and bending moment diagrams; introduction to inelastic action. Analysis and design of structural and machine elements subjected to axial, torsional and flexural loadings. Combined stresses and stress transformation. Deflections. Introduction to elastic stability. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 251 ***Thermodynamics I*** (3 credits)
Prerequisite: MATH 203 (CEGEP Mathematics 103). Basic principles of thermodynamics and their application to various systems composed of pure substances and their homogeneous non-reactive mixtures. Simple power production and utilization cycles. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENGR 273 ***Basic Circuit Analysis*** (3.75 credits)
Prerequisite: EMAT 212, previously or concurrently; PHYS 205 and PHYS 225 (CEGEP Physics 201). Current, voltage, power and energy; instantaneous, average, and RMS values. Resistors. Ohm's law. Dependent and independent sources. Kirchoff's laws, mesh and modal analysis. Network theorems: super position, reciprocity, Thevenin, Norton, maximum power transfer. Inductors and capacitors. Step response of simple RC, RL and RLC circuits. Sinusoidal steady-state response of simple RLC circuits. Phasors, power, impedance, resonance. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 274 ***Modelling and Analysis of Physical Systems*** (3.75 credits)
Prerequisite: ENGR 273. Representations of idealized linear lumped mechanical, fluid and thermal systems in terms of electrical circuits. Singularity functions, system response to singularity functions as input. The Laplace transform as a method of solving system equations. The representation of circuit elements and initial conditions in the transform domain. Generalized impedance and system functions; properties of linear systems; frequency response. Coupled coils and transformers. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 342 ***Structural Analysis I*** (2 credits)
Prerequisite: ENGR 244 previously or concurrently. Analysis of statically determinate structures: deflections, strain energy concepts, virtual work principles. Mueller Breslau principle, influence lines. Approximate methods for statically indeterminate structures. Collapse load analysis. Computer applications. Lectures: 2 hours per week. Tutorial: 1 hour per week.

ENGR 343 ***Structural Analysis II*** (3 credits)
Prerequisite: ENGR 342. Analysis of statically indeterminate structures: the methods of consistent deformations, slope deflection, and moment distribution. Application of virtual work principles. Introduction to matrix methods. Computer applications. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENGR 344 ***Structural Design I*** (3 credits)
Prerequisite: ENGR 342 previously or concurrently. Basis for limit states design. Code requirements. Structural steel design: tension and compression members, beams and beam-columns. Connections. Introduction to the design of timber members. Lectures: 2 hours per week. Laboratory: 2 hours per week.

ENGR 345 ***Structural Design II*** (3 credits)
Prerequisite: ENGR 342 previously or concurrently. Reinforced concrete behaviour in flexure, compression, shear and bond. Ultimate strength design of reinforced concrete beams, columns, walls and footings. Introduction to prestressed concrete and masonry. Lecture: 2 hours per week. Laboratory: 2 hours per week.

ENGR 361 ***Fluid Mechanics I*** (3 credits)
Prerequisite: EMAT 212; EMAT 232; ENGR 251. Fluid properties and flow characteristics; fluid statics, basic laws for systems and control volumes, conservation of mass, linear-momentum equations, first law of thermodynamics, Bernouli equation, kinematics of flow, dynamics of flow, dimensional analysis and similitude, characteristics of real fluid flow, resistance to flow, flow measurement. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ENGR 362 ***Fluid Mechanics II*** (3.75 credits)
Prerequisite: ENGR 361. Incompressible viscous flow, steady closed conduit flow, fluid resistance and boundary layer effects, differential equations for open channel flow, specific energy, gravity waves, hydraulic jump. Fluid machinery. Selected experiments in incompressible flow and in open channel flow. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 371 ***Probability and Random Processes in Engineering*** (3 credits)
Prerequisite: EMAT 232. Axioms of probability theory events, Bayes theorem. Random variables, probability density functions, moments and transformations. Probabilistic models, statistics and elements of hypothesis testing. Random processes, stationarity and ergodicity, correlation and power spectral density functions. Application to engineering design problems. Lectures: 3 hours per week.

ENGR 372 ***Fundamentals of Control Systems*** (3.75 credits)
Prerequisite: EMAT 311 or EMAT 312; ENGR 274. Mathematical models of control systems. Characteristics, performance and stability of linear feedback control systems. Root-locus methods. Frequency response methods. Stability in the frequency domain. Design and compensation of feedback control systems. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 401 ***Engineering Economics and Management Principles*** (1.5 credits)
Prerequisite: ENGR 371. This course is presented in relation to the practice of engineering, and includes the following topics: Role and activities of the manager. Enterprises and organizations; organizational

modes. Planning and control; principles and practice of decision making. Interest and the time value of money; expected value and decision trees. Capital expenditure appraisal, discounted cash flow and other methods. Sensitivity analysis. Lectures: 1½ hours per week.
NOTE: Students who have received credit for ENGR 403 may not take this course for credit.

ENGR 402 ***Engineering Law*** (1.5 credits)
Prerequisite: BLDG 401 or ENGR 401 or INDU 313 previously or concurrently. A review of Québec laws such as those pertaining to engineering registration, property, the right of ownership and its restrictions, civil responsibility and contracts, particularly in application to engineering and related professions, as well as corporations and other business organizations. Lectures: 1½ hours per week.

ENGR 410 ***Technical Report*** (1.5 credits)
Prerequisite: ENCS 281. Students in the BEng programme must submit a technical report on entering their final year. The report must be from 2,000 to 5,000 words long, on a topic closely related to the student's option. The report must present a review of a current engineering problem or current engineering practice; a student's summer work may provide a suitable basis. Students are responsible for acquiring a set of complete instructions and the document *Form and Style* in the spring before entering the final year of the BEng programme. These documents are available from the Office of the Associate Dean.
N.B. The topic must be approved by the student's department no later than the last Monday in June. The report must be submitted no later than 5:00 p.m. on the third Monday after Fall classes begin.

ENGR 451 ***Construction Engineering*** (3 credits)
Prerequisite: BLDG 341 or CIVI 341. The nature of construction and the environment in which the industry works; organizational structures for project delivery; construction contracts and documents; introduction to construction processes: excavation and site works, foundation lay-out, concrete form design, concrete, steel, timber, and masonry construction; project planning, scheduling and control; construction safety. Lectures: 3 hours per week.

ENGR 452 ***Matrix Analysis of Structures*** (3 credits)
Prerequisite: EMAT 232; ENGR 343. Classical and matrix methods of structural analysis; influence coefficients, transformation matrices. Matrix formulation of the force and of the displacement methods of analysis. Direct stiffness approach; sub-structure technique. Introduction to finite-element method. Computer applications. Lectures: 3 hours per week.

ENGR 455 ***Introduction to Structural Dynamics*** (3 credits)
Prerequisite: EMAT 391; ENGR 243; ENGR 342. Theory of vibration. Dynamic response of simple structural systems. Effects of blast, wind, traffic and machinery vibrations. Basic concepts in earthquake resistant design. Computer applications. Lectures: 3 hours per week.

ENGR 471 ***Linear Systems*** (3.75 credits)
Prerequisite: ENGR 372. Review of matrix algebra. State-space description of dynamic systems: linearity, causality, time-invariance, linearization. Solution of state-space equations. Transfer function representation. Discrete-time models. Controllability and observability. Canonical forms and minimal-order realizations. Stability. Stabilizability and pole placement. Linear quadratic optimal control. Observer design. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 472 ***System Optimization*** (3.75 credits)
Prerequisite: EMAT 391. Linear least squares. Properties of quadratic functions with applications to steepest descent method, Newton's method and Quasi-Newton methods for nonlinear optimization. One dimensional optimization. Introduction to constrained optimization, including the elements of Kuhn-Tucker conditions for optimality. Least p^{th} and mini-max optimization. Application of optimization techniques to engineering problems. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 473 ***Control System Design*** (3.75 credits)
Prerequisite: ENGR 372. A course in industrial control design procedures by case study, including practical sensing, control, and actuating elements; optimization of system performance by choice of components and compensation; nonlinearites, introduction to multi-loop systems. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ENGR 475 ***Process Dynamics and Control*** (3.75 credits)
Prerequisite: ENGR 372. Dynamics of mechanical and chemical processes; system capacity; resistance; piping complexes; characteristics and dynamics of control valves; process time constants; proportional, reset and derivative control actions; feedforward and cascade control; direct digital control. Case studies on liquid-level control, temperature and heat exchanger control. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

Social Aspects of Engineering

ENGR 491 ***Engineers and Society*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. Sociological analysis of the interaction between the engineering profession and society, the development of the profession, growth of technical societies, trends in engineering and engineering technology education, relationship to other professions. Role of engineers in Canadian industry, government and industrial research. Lectures: 3 hours per week.

ENGR 492 ***Historical Impact of Technology on Society*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. Social history of technology and of science including ancient and medieval periods, industrial revolution and modern times. Engineering and scientific creativity, social and environmental problems created by uncontrolled technology, appropriate technology. Lectures: 3 hours per week.

ENGR 493 ***Engineering, Resources and Environment*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. Sources, consequences and control of air, water, noise, solid and radiation pollution. Management of mineral and energy resources. Conservation of resources through engineering efficiency, recycling and communal practices. Renewable resources. Case studies of engineering projects. Lectures: 3 hours per week.

ENGR 494 ***Effect of Technology on the Person*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. Psychological effects of various technologies. Changes in personal, family and community values arising from various patterns of industrial development. Enhancement of personal development by technology, adaptation of the machine to humanity. Lectures: 3 hours per week.

ENGR 495 ***Technology Assessment and Control*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. The organization of mechanisms and institutions to control and mediate the unwanted and unanticipated side-effects of contemporary technology. Environmental impact assessment, analysis of industrial health and safety, risk analysis. Technological forecasting, future studies, appropriate technology, the conserver society. Relationships of technology assessment to science policy, resource planning and energy strategy. Lectures: 3 hours per week.

ENGR 496 ***Science Policy and Engineering Innovation*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. An analysis of the basic concepts in science and technology policy including the allocation of resources; research and development; invention, innovation and diffusion. The social impact of policy decisions and the structure and programmes of government organizations involved in the field. Of particular concern will be issues such as foreign ownership, science and technology development within a regional context, and the role of government, industry and the universities within a balanced science and technology policy. Lectures: 3 hours per week.

ENGR 497 ***The Management of Transition to an Information Society*** (3 credits)
Prerequisite: ENCS 281; 20 courses in BEng programme. Understanding the social role of the new technologies of the information machine, the emerging information society, the rate of adoption of new technologies, the implications of the information machines for global societies. The effects of the new technology on the structure of decision-making process. Lectures: 3 hours per week.

Building Engineering

BLDG 341 ***Building Engineering Systems*** (3 credits)
Prerequisite: COMP C211 or COMP 212; EMAT 232, previously or concurrently. Introduction to systematic solution of building engineering problems. Techniques treated include linear programming, network analysis, nonlinear programming, geometric programming and an introduction to decision analysis and simulation. Techniques illustrated by application to problems in building science, building environment, building structures and construction management. Lectures: 3 hours per week.

BLDG 363 ***Building Science I*** (3 credits)
Prerequisite: ENGR 243. General introduction to the aural and visual environment. Subjective and objective scales of measurement. Laws of psychophysics. Introduction to vibration. The hearing mechanism. Transfer of sound. Passive control of noise in buildings, transmission loss. Absorption and reverberation time. Active control of the aural environment. Visual perception. Photometry, brightness, luminance and illumination. Natural lighting of buildings. Artificial lighting. Colorimetry. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 2 hours per week.
NOTE: Students who have received credit for BLDG C362 may not take this course for credit.

BLDG 364 ***Building Science II*** (3 credits)
Prerequisite: ENGR 251; ENGR 361 previously or concurrently. General introduction to the thermal environment. Topics include: heat, temperature, one-dimensional steady state processes. Convection: Natural and forced. Radiation. Combined radiative and convective surface transfer. Psychrometrics. Thermal comfort. Air quality. Condensation: Surface and interstitial. Introduction to compressible viscous flow, friction and flow in pipes; boundary layer and wind effects. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 2 hours per week.
NOTE: Students who have received credit for BLDG C361 may not take this course for credit.

BLDG 371 ***Building Service Systems*** (3.5 credits)
Prerequisite: BLDG 364. Principles of building service systems, including electrical, gas, communications, service water supply and distribution; introduction to plans, codes and standards for utility distribution systems. Lectures: 3 hours per week. Laboratory: 2 hours per week, alternate weeks.

BLDG 401 ***Building Economics*** (3 credits)
Prerequisite: BLDG 341 previously or concurrently. Development of economic performance measures of

interest to developers, owners, contractors and users. Sources of finance and the determinants of the cost of money. Treatment of life cycle costing, economic risk; tax regulation, inflation, forecasting techniques; model building, cost indices, elemental estimating, computerized information systems. Consideration of economic analyses of projects, single buildings and building components. Lectures: 3 hours per week.

BLDG 459 ***Computer Aided Building Design*** (3 credits)
Prerequisite: BLDG 341; BLDG 401 previously or concurrently. Identification of objectives, decision variables, processes and information flow in building design. Applications and evaluation of computer systems to components of building design process. Determination of decision variables in problem modelling and sensitivity of results. Current applications in structural analysis and design, space layout, electrical distribution systems, HVAC design, lighting design, estimating, specification editing and scheduling. Evaluation of issues of interdisciplinary information control and interchange. Lectures: 3 hours per week.

BLDG 461 ***Building Enclosure Design*** (3 credits)
Prerequisite: BLDG 363; BLDG 364; CIVI 321. Technical influences on the design of building exteriors including the control of heat flow, air and moisture penetration, building movements and deterioration. Special emphasis is given to the principle of rain screen walls and to energy conserving designs. Analytical techniques and building codes are discussed through case studies and design projects. Lectures: 3 hours per week.

BLDG 462 ***Modern Building Materials*** (3 credits)
Prerequisite: CIVI 321. Engineering properties of building materials such as: plastics, synthetic fibres, adhesives, sealants, caulking compounds, foams, sandwich panels, composites, polymer-concrete systems, fiber-reinforced concretes, plastic mortars, polymers for flooring, roofing, synthetic wall papers. Their structural, thermal and acoustical properties. Consideration of corrosion, bio- and thermal-degradation, stability to ultraviolet and solar radiation. Laboratory sessions to illustrate synthesis, application, testing, deterioration and protection. Lectures: 3 hours per week.

BLDG 465 ***Fire and Smoke Control in Buildings*** (3 credits)
Prerequisite: BLDG 363; BLDG 364. Topics treated include: fire and smoke control; failure mechanisms of building enclosure, illustrated by case studies; code requirements for enclosure systems; systems approach for fire safety. Lectures: 3 hours per week.

BLDG 471 ***HVAC System Design*** (3 credits)
Prerequisite: BLDG 371, BLDG 476 previously or concurrently. Principles of HVAC system design and analysis; component and system selection criteria, including room air distribution, fans and air circulation, humidifying and dehumidifying processes, piping and ducting design. Air quality standards. Control systems and techniques; operational economics; computer applications. Lectures: 3 hours per week. Laboratory: 2 hours per week.

BLDG 472 ***Building Energy Conservation Technologies*** (3 credits)
Prerequisite: BLDG 471 previously or concurrently. Identification of the optimal energy performance achievable with various types of buildings and service systems.
Reduction of infiltration. Control systems and strategies to achieve optimal energy performance. Low energy heat rejection and recuperation systems. Effective utilization of daylight, heat pumps, passive and active solar heaters, heat storage, heat pipes and thermosyphons in new and old buildings. Lectures: 3 hours per week.

BLDG 473 ***Building Acoustics*** (3 credits)
Prerequisite: BLDG 363. Noise control criteria and regulations, instrumentation, noise sources, room acoustics, walls, barriers and enclosures, acoustical materials and structures, vibration and noise control systems for buildings. Lectures: 3 hours per week.

BLDG 474 ***Building Illumination*** (3 credits)
Prerequisite: BLDG 363. Production, measurement and control of light, design of lighting systems. Design in respect to daylighting. Integration of lighting systems with mechanical systems. Lectures: 3 hours per week.

BLDG 475 ***Indoor Air Quality*** (3 credits)
Prerequisite: BLDG 371 previously or concurrently. Elements of indoor air quality, physical/chemical characteristics of contaminants, health effects, standard requirements. Estimation of the levels of indoor air contaminants in buildings. Design of ventilation systems for pollutant control. Air pollution due to outdoor air supply through ventilation systems. Effect of outdoor air pollution on indoor air quality. Lectures: 3 hours per week.

BLDG 476 ***Thermal Analysis of Buildings*** (3 credits)
Prerequisite: BLDG 364. Two and three dimensional steady state and transient conductive heat transfer together with convection and radiation as applied to building materials and geometries. Heating and cooling load analysis including building shapes, construction type, solar radiation, infiltration, occupancy effects and daily load variations. Computer applications for thermal load analysis. Introduction to heat exchangers. Lectures: 3 hours per week.

BLDG 481 ***Architectural Appreciation and Design*** (3 credits)
Prerequisite: 20 courses in the BEng programme. Historical and modern architectural theories. Meaning, intentions and formal issues in contemporary design. The influence of technology, energy conservation and environmental constraints on built form. Architecture vs. industrial design. Lectures: 3 hours per week.

BLDG 491 ***Labour and Industrial Relations in Construction*** (3 credits)
Prerequisite: ENGR 451. The study of labour legislation with special emphasis on the construction industry, union organization, the theory and practice of negotiations, mediation, contract administration and arbitration. Review of actual contracts, discussion of future trends. Lectures: 3 hours per week.

BLDG 492 ***Construction Processes*** (3 credits)
Prerequisite: ENGR 451. A study of current construction methods and techniques. The subjects include site preparation and earth-work, wood framing, masonry, concrete forming, slipforming, precast construction, industrialized building, deep excavation shoring and underpinning. Design, erection and removal of temporary construction work. Current field practice and safety considerations. Site visits. Lectures: 3 hours per week.

BLDG 493 ***Legal Issues in Construction*** (3 credits)
Prerequisite: ENGR 451. Legal concepts and processes applicable to the development of constructed facilities and to the operation of the construction firm. Emphasis on Québec law and institutions. Lectures: 3 hours per week.

Civil Engineering

CIVI 231 ***Geology*** (2.75 credits)
Basic principles of physical and structural geology, with emphasis on topics related to Civil Engineering, study of minerals, rocks and soil types, load formation, techniques of air photo interpretations and geological maps. Lectures: 2 hours per week. Laboratory: 3 hours per week, alternate weeks.

CIVI 271 ***Surveying*** (3 credits)
Elementary operations employed in engineering surveying; use, care and adjustment of instruments; linear and angular measurements; traversing; earthwork calculations; theory of errors; horizontal and vertical curves and curve layout; slope stakes and grades, application of surveying methods to city, and topographic surveying and introduction to advanced surveying techniques; use of digital computers in surveying calculations.
Summer school taken before entering second year of study in the BEng programme. Lectures and Field Work: 8 hours per day; 6 days per week for 3 weeks.

CIVI 321 ***Engineering Materials*** (3.75 credits)
Linear and non-linear material behaviour, time-dependent behaviour; structural and engineering properties of structural metals; behaviour of wood; production and properties of concrete; bituminous materials, ceramics, plastics; introduction to composite materials. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

CIVI 341 ***Civil Engineering Systems*** (3 credits)
Prerequisite: EMAT 271 or ENGR 371 previously or concurrently; COMP 212. Development of concepts and techniques commonly associated with systems engineering which are applicable to design and operation of systems that concern Civil Engineers. Problem formulation, optimization, linear programming, sequencing, routing and scheduling, mathematical expectation, random models and queues. The techniques developed are used to solve problems in transportation, water resources, structures and construction management. Lectures: 3 hours per week.

CIVI 372 ***Transportation Engineering*** (3 credits)
Prerequisite: CIVI 341. Social and economic importance of transportation. Essential elements of transportation systems and characteristics of different modes of transportation. Fundamentals of individual vehicle motion and traffic flow. Transportation demand and planning process. Transportation network flows. Introduction to location and design of system components. Lectures: 3 hours per week.

CIVI 381 ***Open Channel Hydraulics*** (3.5 credits)
Prerequisite: ENGR 362; EMAT 271 or ENGR 371. Open channel hydraulics; critical flow, uniform and non-uniform flows; design of erodible and non-erodible channels; flow profile, classification and computation. Practical problems. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 431 ***Soil Mechanics*** (3.75 credits)
Prerequisite: ENGR 244. Index properties and classification of soils. Weight-volume relationships. Soil structures. Moisture-density relationships. Permeability, deformation and strength of soils. Principle of total and effective stresses. Steady stage seepage through isotropic soil media. Stress distribution due to external loads and analysis of total settlements. Outline of theory of consolidation. Fundamentals of stability of earth retaining walls, slopes and footings. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

CIVI 434 ***Geotechnical Analysis*** (3 credits)
Prerequisite: EMAT 391. Seepage through anisotropic soils. Linear and nonlinear consolidation theories.

Sand drains. Introduction to soil dynamics and rock mechanics; wave propagation in soils and rock; machine foundations. Stress concentration around tunnels opened in rock. Pressure distribution on buried structures. Introduction to numerical techniques as applied to solution of geotechnical problems. Lectures: 3 hours per week.

CIVI 435 ***Foundation Design*** (3.5 credits)
Prerequisite: ENGR 343; CIVI 431. Loads, bearing capacity and settlement. Lateral pressures. Foundation drainage and water-proofing. Spread footings. Strip footings. Pile foundations. Caissons. Retaining walls. Sheet piling walls. Braced cofferdams. Cellular cofferdams. Anchors. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 436 ***Mechanics of Geotechnical Materials*** (3 credits)
Prerequisite: CIVI 431. Mechanics of ideal geotechnical materials: elastic, viscoelastic, and plastic; behaviour of soils, permafrost, rocks and ice. Mechanical properties of sensitive clays, muskeg, expansive and collapsible soils. Processed geotechnical materials used in earth embankments, pavements and base courses, hydraulic fills and tailings. Improvement techniques: chemical and mechanical. Quality control of processed materials. Lectures: 3 hours per week.

CIVI 441 ***Civil Engineering Systems Analysis*** (3 credits)
Prerequisite: CIVI 341. Approaches to formulation and problem structure, evaluation criteria, applications of optimization, probability and decision theory to the solution of Civil Engineering problems. Mini projects. Lectures: 2 hours per week. Laboratory: 2 hours per week.

CIVI 451 ***Advanced Structural Analysis*** (3.5 credits)
Prerequisite: ENGR 343. Analysis of frames, arches and cable structures; shear centre; unsymmetrical bending; bending of curved bars; influence lines for statically indeterminate structures; plastic analysis; shear walls; computer applications. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 453 ***Design of Reinforced Concrete Structures*** (3.5 credits)
Prerequisite: ENGR 343; ENGR 345. Design of long columns, columns subjected to biaxial bending, two-way slabs, flat plates, girders and shells. Design of frames, shear-walls, and prefabricated structures. Prestressed concrete: losses, short and long term deflections; design requirements for shear, flexure, bond, and anchorage. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 454 ***Design of Steel Structures*** (3.5 credits)
Prerequisite: ENGR 343; ENGR 344. Trends and developments in structural steel design. Framing systems. Floor systems; composite construction; plate girders. Design of braced frames, moment resisting frames. Connections. P-Delta effects. Introduction to steel bridge design. Lectures: 2 hours per week Laboratory: 3 hours per week.

CIVI 461 ***Continuum Mechanics*** (3 credits)
Prerequisite: ENGR 244; ENGR 361. A unified approach to solution of problems involving continuous domains. Transformation of coordinates, tensors, state of stress, rotation and deformation, conservation of mass, momentum, moment of momentum and energy theorems, constitutive laws, application to problems of fluid mechanics, elasticity and plasticity. Lectures: 3 hours per week.

CIVI 471 ***Highway Design*** (4.5 credits)
Prerequisite: CIVI 271; CIVI 372. Design controls and criteria including traffic and highway characteristics and capacity. Location and right-of-way. Earthworks. Geometric design of highways and terminals. Pavement design. Highway design project. Lectures: 3 hours per week. Laboratory: 3 hours per week.

CIVI 472 ***Traffic Engineering*** (3 credits)
Prerequisite: CIVI 341; CIVI 372. The vehicle, driver, and roadway system, traffic surveys, and volume studies, traffic flow theory, highway capacity and level of service for freeways, rural highways and urban streets, accident studies, network analysis, traffic control devices, traffic control measures, and highway safety. Lectures: 3 hours per week.

CIVI 474 ***Urban Transportation Planning*** (3 credits)
Prerequisite: CIVI 341; CIVI 372. The systems approach to transportation planning process, supply and demand functions, travel forecasting models, land-use models, urban data collection and analysis, impact on the environment, evaluation of alternative transportation systems, future transportation technology. Lectures: 3 hours per week.

CIVI 481 ***Water Supply Systems*** (3.5 credits)
Prerequisite: ENGR 362. Water use cycle; capacity of water supply systems; sources of raw water; development of surface water and ground water; water quantities and requirements; design of distribution systems; storage; pumping; water quality; introduction to water purification practices. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 482 ***Urban Sanitation*** (3.5 credits)
Prerequisite: CIVI 381. Characteristics and quantities of domestic wastewaters. Urban hydrology and drainage. Design of sewers. Introduction to physical and biological wastewater treatment practices. Disposal of wastes. Stream pollution and control. Computer simulations. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 483 ***Hydrology*** (3.5 credits)
Prerequisite: CIVI 381. Weather elements; precipitation, stage-discharge relations; evapo-transpiration; ground water flow; streamflow hydrography, unit hydrography, synthetic hydrographs; laminar flow; hydrologic routing; instantaneous hydrograph; hydraulic routing, method of characteristics, kinematic routing; statistical analysis, confidence intervals, stochastic generator, autoregressive model; applications of hydrology. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 484 ***Hydraulic Engineering*** (3.5 credits)
Prerequisite: CIVI 381. Outlet works for reservoirs. Elements of river and channel engineering. Water resource system design and project economics. Application of numerical, probabilistic and graphical optimization techniques to systems design. Computer applications. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 485 ***Hydraulic Structures*** (3.5 credits)
Prerequisite: CIVI 431; CIVI 483 previously or concurrently. Design of storage dams; characteristics of spillways and other outlet works; design of control structures; principles and design of flow measuring structures; special topics. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 486 ***Hydraulic Machinery*** (3 credits)
Prerequisite: ENGR 362 previously or concurrently. Energy transfer in hydraulic machinery; analysis and design of axial flow pumps and reaction turbines; analysis and design of centrifugal pumps and impulse turbines; cavitation and two-phase flow; noise and vibration problems. Selected topics related to hydraulic machines - cavitation, diffuser design, core formation and draft tube design. Lectures: 2 hours per week. Laboratory: 2 hours per week.

CIVI 487 ***Environmental Engineering*** (3.5 credits)
Prerequisite: CIVI 481 previously or concurrently. Stream pollution and control; ground water pollution; air pollution, acid rain, meteorological aspects. Lectures: 2 hours per week. Laboratory: 3 hours per week.

CIVI 488 ***Water Quality*** (3 credits)
Prerequisite: CIVI 481 previously or concurrently. Physical, chemical and biological characteristics of water, Eutorophication, water quality standards; chemical kinetics related to reactor models; large scale transport of contaminants, hydrodynamic dispersion. Containment of reactive contaminants; special treatment methods - absorption, gas stripping, membrane process; disinfection and ion exchange. Lectures: 2 hours per week. Laboratory: 2 hours per week.

CIVI 489 ***Computational Hydraulics*** (3.5 credits)
Prerequisite: CIVI 381. Continuous and discrete forms of conservation laws; mass, momentum, and energy in one-, two- and three-dimensional forms; St. Venant and Boussinesq equations; numerical methods; finite differences, implicit and explicit schemes; finite elements; application to engineering and environmental hydraulics; computer applications. Lectures: 2 hours per week. Laboratory: 3 hours per week.

Computer Engineering

COEN 231 ***Introduction to Discrete Mathematics*** (3 credits)
Prerequisite: MATH 204 or CEGEP Mathematics 105. Sets and binary relations. Algebraic structures including binary operations, semigroups, groups, rings and morphisms. Lattices including posets and distributive lattices. Graphs. Boolean algebras including lattice representation of Boolean algebras and canonical expressions. Lectures: 3 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 231 may not take this course for credit.

COEN 311 ***Computer Organization & Software*** (3 credits)
Prerequisite: COMP 212 or COMP 244. Introduction to basic functional units in a computer and terminology; fixed-point and floating-point arithmetic; machine programming fundamentals; instruction structure and addressing modes; subroutine, stack, the assembly process. Microprocessors: examples of architectures, assembler and addressing modes, instruction set, programming; input/output, programmed and interrupt driven I/O; memory management; operating systems concepts. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COEN 312 ***Digital Systems Design*** (3.75 credits)
Boolean algebra, logic minimization, multiple output circuits. Designing with MSI and LSI chips, decoders, multiplexers, adders, multipliers, programmable logic devices. Introduction to sequential circuits; flip-flops. Completely specified sequential machines. Machine equivalence and minimization. Implementation of clock mode sequential circuits. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.
NOTE: Students who have received credit for COEN 413 may not take this course for credit.

COEN 412 ***Digital Electronics*** (3.75 credits)
Prerequisite: ELEC 312. Modelling of semiconductor devices for analysis and simulations; MOS, CMOS, TTL, Schottky TTL, ECL and GaAs circuits. Switching speeds, power dissipation, noise immunity, fan-in and fan-out. Flip-flops and multi-vibrators; interface and BiCMOS circuits. Static and dynamic random-access memories; read-only memories and programmable logic devices and arrays. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

COEN 414 ***Sequential Circuits*** (3.75 credits)
Prerequisite: COEN 312. State equivalence and minimization of completely-specified sequential machines. State compatibility and minimization of incompletely-specified sequential machines. Analysis and design of fundamental-mode and pulse mode asynchronous sequential circuits. Races and hazards in asynchronous circuits; race-free assignments and hazard-free logic. State assignment and structural decomposition of sequential circuits; series, parallel and common-factor decompositions. Information flow in sequential machines; testing and diagnosis of sequential circuits, test sequence generation. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

COEN 416 ***Computer Architecture and Design*** (3 credits)
Prerequisite: COEN 311; COEN 312. Processor Organization: Overview of computer architecture and design methodology; data path, control unit, and ALU design, advanced techniques for fast multiplication and design; bit-slice and pipelined processors. Control unit division and optimization: Microprogramming, hard-wired control, sequence counters, delay and state methods, optimization techniques, bit-slice sequencers. Memory Organization: Memory hierarchy, paging and segmentation, virtual memory, cache and associative memories, replacement algorithms, memory interleaving, examples. Pipelining: Prefetching, control algorithms, performance criteria, multifunction pipelines. Lectures: 3 hours per week.

COEN 417 ***Microprocessor Systems*** (4.5 credits)
Prerequisite: COEN 311; COEN 312. Introduction to microprocessor interfacing. Bus functions, bus interconnections, synchronous and asynchronous bus. Signal flow and data transfer, decoding for I/O and memory, memory organization and structures. Interfacing examples; parallel interfacing, serial interfacing, the interrupt system; bus arbitration and DMA. Analog to digital and digital to analog structures and interfacing. Floppy disc and CRT controllers; bus standards; local area networks. Benchmarking and comparative study of recent microprocessors. Lectures: 3 hours per week. Laboratory: 3 hours per week.

COEN 418 ***Real-Time System Design*** (4.5 credits)
Prerequisite: COEN 417; COMP 343. Introduction to real-time systems. Requirements, programming, design, applications, reliability and fault tolerance. Real-time multi-tasking operating systems. Multi-tasking and schedule, task control, intertask communication and synchronization, interrupt and exception handling, examples. Real-time multi-processor system design: Concurrent programming and examples of programming languages, concurrent processes and reliability, resource sharing and control, inter-processor communication and synchronization, bus configuration and link configuration, special processors. Case studies in real-time system design. Lectures: 3 hours per week. Laboratory: 3 hours per week.

COEN 431 ***Software Engineering*** (3.75 credits)
Prerequisite: COMP 343. Overview of an object-oriented language. Introduction to the lifetime of a software system; software reliability; basics of information hiding, object-oriented design, requirements analysis, scenario development, facilities dependency diagram. System structure, module interfaces, module interface specifications, algebraic specifications, trace specifications, canonical traces. Mapping module specifications into module implementations; testing and debugging, test derivation from module specifications, test plans; code walkthroughs, reports. Product delivery, maintenance, configuration management, versions; CASE tools. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.
NOTE: Students who have received credit for COMP 354 may not take this course for credit.

COEN 481 ***Computer Engineering Project*** (3 credits)
Prerequisite: Registration in final year and permission of the Department. The Computer Engineering project provides an opportunity for a student to carry out a design project associated with one or more of the specialist elective courses, under the supervision of a faculty member. The nature of the project selected should be such as to require independent study of current technical literature. When feasible the designs will be assessed in the laboratory. Each student is to present a complete report at the end of the project. Equivalent laboratory time: 6 hours per week.

COEN 498 ***Topics in Computer Engineering*** (3 credits)
Prerequisite: Permission of the Department. The course, when offered, will include topics which complement elective courses in computer engineering and computer science. Lectures: 3 hours per week.

Electrical Engineering

ELEC 251 ***Fundamentals of Applied Electromagnetics*** (3 credits)
Prerequisite: ENGR 273; EMAT 232 previously or concurrently. Electric charge, Coulomb's Law, electrostatic forces, electric field, Gauss' Law, electric potential, stored energy. Dielectrics, properties of materials in electric fields. Electric current, conduction in a vacuum and in material media, displacement current, magnetic field of a current, force on a current-carrying wire, magnetic induction, electromotive force, energy stored in a magnetic field. Magnetism in material media, magnetic circuits. Time varying fields. Capacitance, resistance, inductance, elements of electric circuits. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ELEC 311 ***Electronics I*** (4.5 credits)
Prerequisite: ENGR 274. Review of linear circuits: different types of amplifiers, frequency response of amplifiers, network theorems. Inverting and noninverting configurations of operational amplifier circuits, non-ideal performance of operational amplifiers: finite open-loop gain, bandwidth, slew rate, common-mode rejection, finite input and output resistances, dc problems. Characteristics and physical operation

of junction diodes. Breakdown region and Zener diodes, modelling of diodes. Half- and full-wave rectifiers, precision rectifiers, rectifiers in power supplies. Limiters, clampers, and comparators. Physical operation and characteristics of field-effect and bi-polar junction transistors. Biassing, modes of operation, dc analysis, modelling, second-order effects and small-signal operation. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week.

ELEC 312 ***Electronics II*** (4.5 credits)
Prerequisite: ELEC 311; ELEC 341. Biasing of transistors for discrete and integrated circuit designs. Single-stage amplifiers in different configurations., differential amplifiers, multistage amplifiers. High-frequency modelling of transistors. Frequency response of common-source, common-emitter, emitter-follower, common-base, cascode, cascade, and differential-pair configurations. Wideband amplifiers. Negative feedback and feedback topologies in amplifier circuits. Stability problems, frequency compensation. Introduction to oscillator circuits. Lectures: 3 hours per week. Laboratory: 3 hours per week.

ELEC 318 ***Industrial Electronics*** (3.75 credits)
Prerequisite: ENGR 274. A survey of electronic components and systems used in industry. Analog devices; the transistor, the operational amplifier and their models. Amplifiers. Digital devices: gates, logic devices. Large scale integrated circuits, microcomputers. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week; alternate weeks.
NOTE: Electrical Engineering and Computer Engineering students may not take this course for credit.

ELEC 321 ***Electrical Properties of Materials*** (3 credits)
Prerequisite: ELEC 251. Structure of crystals. Electrical, magnetic, dielectric and optical characteristics and their measurements. Energy levels, localized states, and transport properties of solids. Recent device applications of metals, semi-metals, semiconductors, semi-insulators and insulators. Lectures: 3 hours per week.

ELEC 331 ***Electromechanics*** (3.75 credits)
Prerequisite: ELEC 251; ENGR 274 previously or concurrently. Three-phase circuits. Power transformers. Energy in singly and doubly excited systems; principles of electromechanical energy conversion. Basic features and models of d.c. machines, 3-phase induction machines, 3-phase synchronous machines. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 334 ***Electric Machinery*** (3.75 credits)
Prerequisite: ENGR 274. Three-phase circuits. Magnetic fields, circuits and forces; transformers; basic features of rotating machines; models, characteristics and applications of d.c. machines, polyphase synchronous and induction machines. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.
NOTE: Computer Engineering and Electrical Engineering students may not take this course for credit.

ELEC 341 ***Linear Network Analysis*** (3 credits)
Prerequisite: EMAT 312 previously or concurrently; ENGR 274. The s-plane and system functions. Network topology and equilibrium equations. One- and two-port networks. Indefinite admittance matrix and applications. State variable analysis. Signal flow graphs. Adjoint networks and sensitivity computation. Discussion of one computer-aided analysis programme: SPICE. Lectures: 3 hours per week.

ELEC 351 ***Electromagnetic Waves and Guiding Structures*** (3 credits)
Prerequisite: EMAT 312 previously or concurrently; ELEC 251. Review of the differential forms of the laws of electromagnetism. Maxwell's equations. Boundary conditions. Power and energy. Uniform plane waves. Transmission line theory. Rectangular waveguides. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ELEC 353 ***Basic Electromagnetics and Transmission Line Theory*** (3 credits)
Prerequisite: EMAT 312; ELEC 341. Laws of electromagnetism including differential forms. Boundary conditions. Maxwell's equations. Transmission line theory. Lectures: 3 hours per week. Tutorial: 1 hour per week.

ELEC 401 ***Electrical Engineering Seminar*** (1 credit)
Prerequisite: ENCS 281. Seminars are organized on a regular basis to provide students with an opportunity to exercise their ability to present and defend their thoughts on topics of their own choice. Students will be encouraged to devote some of their presentations to such topics as continuing professional education and professional ethics. Seminars: 2 hours per week.

ELEC 411 ***Pulse and Waveform Generation*** (3.75 credits)
Prerequisite: EMAT 312; ELEC 312. Modelling and techniques of analysis. Multivibrator circuits: analysis, design, and applications. Oscillator circuits. Linear sawtooth generators. Pulse transformers and blocking oscillators. Negative-resistance devices and some applications. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 421 ***Solid State Devices*** (3.75 credits)
Prerequisite: ELEC 321. Physics of solid state monojunction devices. Basic semiconductor and physical mechanisms of p-n junctions, tunnel diodes, interface and thin-film devices, electroluminescence diodes, solar cells, and photodetectors. Design, fabrications, and evaluation of planar silicon diodes. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 422 ***Design of Integrated Circuit Components*** (3.75 credits)
Prerequisite: ELEC 421. The structure, characteristics and design of I.C. device components. Fabrication of I.C.'s: mask layout, interconnections, performances, reliability and yield of production. Competitive I.C. technologies. A planar bipolar transistor will be designed, fabricated and evaluated in the laboratory. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 431 ***Electrical Power Systems*** (3.75 credits)
Prerequisite: ELEC 331. Inductance, capacitance, resistance of polyphase transmission lines; current and voltage relations of transmission lines; load flow studies; symmetrical and unsymmetrical faults; power system stability. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 432 ***Control of Electrical Power Conversion Systems*** (3.75 credits)
Prerequisite: ENGR 372; ELEC 331. Basic considerations and control requirements. Control system principles and structures. Controller characteristics and operation. Static power conversion systems. Electromechanical systems and electrical machine modelling. Control system design. Applications to electric motor drives and typical power conversion systems. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 433 ***Static Power Converters*** (3.75 credits)
Prerequisite: ENGR 372; ELEC 311; ELEC 331. Circuits and operating principles of phase-controlled converters; external performance characteristics; harmonic content of d.c. output voltage and a.c. input current; dual converters; converters as power amplifiers. Application to variable speed drives; d.c. machine dynamics, feedback control. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 441 ***Modern Filter Design*** (3.75 credits)
Prerequisite: ELEC 341. Image parameters, constant-k and m-derived filters. The approximation problem. Design of Butterworth, Tchebyscheff, and Bessel filters as terminated lossless networks. Design of constant-resistance all-pass networks. Design of active-RC filters using operational amplifiers. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 442 ***Digital Signal Processing*** (3.75 credits)
Prerequisite: ELEC 341. Discrete-time linear systems. Basic digital signal processing techniques. Design procedures for finite and infinite impulse response filters. Discrete and fast Fourier transforms. Noise analysis. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 453 ***Microwaves and Optics: Transmission*** (3.75 credits)
Prerequisite: EMAT 312; ELEC 341; ELEC 351. Plane waves, surface waves, wave impedance, surface impedance. Two-wire, coaxial and parallel-plate transmission lines. Waveguide modes, cutoff frequency, dispersion, losses. Dielectric optical waveguides, surface waveguides, microstrip. Principles of light transmission optics. Basic antenna theory, linear dipole, aperture antennas, diffraction, linear arrays. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 454 ***Microwaves and Optics: Circuits*** (3.75 credits)
Prerequisite: ELEC 453. Circuit theory for waveguiding systems, waveguide discontinuities. Binomial and Chebyshev impedance transformer design. Electromagnetic resonators, the Fabry-Perot resonator. Periodic structures, microwave filters. Faraday rotation and ferrite devices. E.M. wave propagation in optically active media, electro-optic devices. Principles of microwave tubes. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 455 ***Acoustics*** (3 credits)
Prerequisite: ELEC 351. Sound generation and propagation in elastic media; conversion between acoustical, electrical, and mechanical energy. Lumped-parameter approximations, sound in rooms, underwater acoustics, microphones; loudspeakers and audio communications problems; noise and vibration control problems. Lectures: 3 hours per week.

ELEC 461 ***Communication Circuits and Systems*** (3.75 credits)
Prerequisite: EMAT 312; ELEC 312. Systems and signal analysis: Fourier transformation and Fourier series, spectral analysis, concepts of bandwidth and power. Principle of amplitude (DSB-SSB-VSB), phase and frequency modulation schemes. Basic communication circuits: multipliers, mixers, envelope detectors, frequency discriminators, filters, tuned circuits, limiters, oscillators, phase-locked loops. Commercial broadcasting and reception systems: AM, FM, Stereo FM, TV. Noise in communication systems: thermal noise, noise bandwidth, noise figures, noise temperature. Qualitative treatment of modulation systems (AM, FM) in the presence of noise. Principles of signal-to-noise ratio, pre-emphasis and de-emphasis. Comparative performance. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 462 ***Statistical and Digital Communications*** (3.75 credits)
Prerequisite: EMAT 271 or ENGR 371; ELEC 461. Transmission and filtering of random signals, analysis of modulation systems, in particular Pulse Code Modulation, Phase Shift Keying, Frequency Shift Keying, etc., and introduction to noise analysis, information theory and coding. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

ELEC 463 ***Telecommunication Networks*** (3 credits)
Prerequisite: ENGR 371. Introduction to layered network architecture; data link control and communication

channels. Delay models in data networks; Simple queueing systems; multiaccess communications; ALOHA, CSMA, reservation schemes, conflict-free access schemes. Satellite, packet radio networks, token rings and polling; routine and flow control; ISDN. Lectures: 3 hours per week.

ELEC 481 ***Electrical Engineering Project*** (3 credits)
Prerequisite: Registration in final year and permission of the Department. The Electrical Engineering project provides an opportunity for a student to carry out a design project associated with one or more of the specialist elective courses, under the supervision of a faculty member. The nature of the project selected should be such as to require independent study of current technical literature. When feasible the designs will be assessed in the laboratory. Each student is to present a complete report at the end of the project. Equivalent laboratory time: 6 hours per week.

ELEC 498 ***Topics in Electrical Engineering*** (3 credits)
Prerequisite: Permission of the Department. This course may be offered in a given year upon the authorization of the Electrical Engineering Department. The course content may vary from offering to offering and will be chosen to complement the elective courses available in a given option or options. Lectures: 3 hours per week.

Industrial Engineering

INDU 313 ***Industrial Economics*** (3 credits)
Prerequisite: ACCO 213. Development of economic performance measures. Sources of finance and the cost of money. Consideration of: life cycle costing, economic risk, tax regulations, inflation, short and long term forecasting techniques, model building, cost indices, elemental estimating, computerized information systems. Lectures: 3 hours per week.
NOTE: Students who have received credit for BLDG 401 may not take this course for credit.

INDU 320 ***Production Engineering I*** (3 credits)
Prerequisite: INDU 323. The systems approach to production; interrelationships among the component blocks of the system, including capacity planning, plant location, layout of physical facilities, maintenance. Lectures: 3 hours per week.

INDU 321 ***Production Engineering II*** (3 credits)
Prerequisite: INDU 320. A continuation of Production Engineering I, with emphasis on the design of the control systems for the production facility. Topics include allocation of resources, scheduling work methods and measurement, materials handling, process control and quality control. Lectures: 3 hours per week.

INDU 323 ***Industrial Operations Research*** (3 credits)
Prerequisite: COMP 212. An introduction to the application of mathematical models to various industrial problems; queuing theory, game theory, linear programming, inventory theory and Monte Carlo processes. Lectures: 3 hours per week.
NOTE: Students who have received credit for ENGR C412 may not take this course for credit.

INDU 330 ***Organizational Management*** (3 credits)
Organizational structures, their growth and change. Motivation, leadership and group behaviour. Design of alternatives for improving organizational performance and effectiveness. Lectures: 3 hours per week.

INDU 371 ***Advanced Probability and Statistics*** (3 credits)
Prerequisite: ENGR 371. Parameter estimation and hypothesis testing. Goodness-of-fit and independence tests; linear regression and correlations; Quality Control; Monte Carlo simulation. Reliability analysis: parallel and series systems, exponential model, active and standby redundancy, life testing and model estimation; Queueing Analysis: discrete-time and continuous-time Markov chains, steady state probabilities, availability analysis, pure birth-death processes, flow-balance, elementary queueing models. Applications to industrial engineering problems. Lectures: 3 hours per week.

INDU 410 ***Safety Engineering*** (3 credits)
Prerequisite: INDU 412. The design of plant layout and work stations in order to provide a safe work environment. Safety features for machines. Industrial training methods. Accident prevention programmes. Cost of industrial accidents. Lectures: 3 hours per week. Tutorial: 2 hours per week.

INDU 411 ***Computer Integrated Manufacture and Assembly*** (3.75 credits)
Prerequisite: ENGR 372 previously or concurrently; MECH 311. Concepts and benefits of integrated computer-aided manufacturing and assembly, illustrated with case studies. Control of machine tools (NC, CNC, DNC) with an introduction to computer and direct numerical control, integration with CAD. Robots in manufacturing applications. Survey of kinematic structures in robots, typical applications in tool- and work-handling, path control. Computerized material handling. Reduction of storage requirements and transfer time. Computerized conveyor systems. Automatic guided vehicles. Overall factory automation. Design of work centres, work cells, optimal manufacturing operations, computer-aided inspection and quality control. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

INDU 412 ***Human Factor Engineering*** (3 credits)
This course treats the anatomical and physiological factors underlying design of interfaces between people and machines; the psychological factors involved in the allocation of function between people and

machines in an over-all system, for example, information-processing capacity, acquisition and retention of skill, adaptability and the effects of stress. Lectures: 3 hours per week.
NOTE: Students who have received credit for INDU 310 may not take this course for credit.

INDU 423 ***Inventory Control*** (3 credits)
Prerequisite: INDU 321. The basic features of production systems and methods of modelling their operation; forecasting; aggregate planning and scheduling; materials requirement planning; inventory analysis and control; the role of inventories in physical distribution; inventories in manufacturing, systems such as KANBAN and Just-in-Time. Lectures: 3 hours per week.

INDU 480 ***Industrial Engineering Project*** (3 credits)
Prerequisite: Completion of 20 courses. INDU 481 concurrently. Students will be assigned, as individuals or as small groups, specific industrial engineering projects. It is expected that these projects will be drawn from local industry and will thus reflect actual problems faced by industry. The project report will be prepared under the supervision of a staff member. Lectures: 1 hour per week, 1 term. Laboratory: 2 hours per week, 2 terms.

INDU 481 ***Industrial Engineering Seminar*** (0.5 credit)
Prerequisite: INDU 480 concurrently. Students are given the opportunity to make oral presentations of the work carried out for their project. These presentations will be video-taped and used as a teaching tool to improve verbal communication abilities. Seminar: 1 hour per week.

Mechanical Engineering

MECH 221 ***Materials Science*** (2 credits)
Prerequisite: CHEM 205 (CEGEP Chemistry 101). Relationships between properties and internal structure, atomic bonding; molecular, crystalline and amorphous structures; crystalline imperfections and mechanisms of structural change; micro-structures; structures and mechanical properties of polymers. Lectures: 2 hours per week. Tutorial: 2 hours per week.
NOTE: Students who have received credit for ENGR C221 may not take this course for credit.

MECH 311 ***Manufacturing Processes*** (2.5 credits)
Prerequisite: MECH 313. Fundamentals of manufacturing processes and their limitations, metrology, machine shop practice, forming, machining and casting processes, welding and joining, plastic production and non-conventional machining techniques. Laboratory includes use of basic machines, preparation of shop drawings with emphasis on production and field trips to local industries. Lectures: 2 hours per week. Tutorial: 4 hours per week, alternate weeks including industrial visits. Laboratory: 2 hours per week, alternate weeks.

MECH 313 ***Machine Drawing and Design*** (3 credits)
Prerequisite: ENGR 213. The use of drawings and other graphical methods in the process of engineering design. Industrial standards and specifications, standard components and their use in product design. Detailed study of machine elements and assemblies, their representation and function in design and working drawings. Dimensioning and tolerance systems related to manufacturing processes, interchangeability, quality control, patent procedures. Pencil thinking and computer graphics in the design process. Computer aided machine drawing. A student design project will be an integral part of this course. An eight hour introduction to machine shop techniques forms part of the tutorial. Lectures: 3 hours per week. Tutorial: 2 hours per week.
NOTE: Students who have received credit for ENGR C214 and MECH C312 may not take this course for credit.

MECH 321 ***Properties and Failure of Materials*** (3 credits)
Prerequisite: MECH 221. The service capabilities of alloys and their relationship to microstructure as produced by thermal and mechanical treatments; material codes; material selection for design; strengthening mechanisms, composite materials. Modes of failure of materials; fracture, fatigue, wear, creep, corrosion, radiation damage. Lectures: 3 hours per week. Tutorial and practicum: 1½ hour per week.

MECH 341 ***Kinematics of Mechanisms*** (2.5 credits)
Prerequisite: EMAT 232; ENGR 243. Geometry of motion and mobility criteria; kinematic analysis and synthesis of linkages; theory of spur gears, helical, worm and bevel gearing; gear trains and differentials; cam kinematics. Lectures: 2 hours per week. Tutorial: 2 hours per week, alternate weeks. Laboratory: 2 hours per week, alternate weeks.

MECH 342 ***Dynamics of Machines*** (2.5 credits)
Prerequisite: MECH 341. Kinematic analysis of space mechanisms; static and dynamic analysis of planar mechanisms and gear trains; dynamic analysis of space mechanisms; gyroscopic forces; balancing of rating and reciprocating machinery. Lectures: 2 hours per week. Tutorial: 2 hours per week, alternate weeks. Laboratory: 2 hours per week, alternate weeks.

MECH 351 ***Thermodynamics II*** (3.75 credits)
Prerequisite: COMP 212, ENGR 251. Brief review of ideal gas processes. Semi-perfect gases and the Gas Tables. Mixtures of gases, gases and vapours, air conditioning processes. Combustion and combustion equilibrium. Applications of thermodynamics to power production and utilization systems: study of

basic and advanced cycles for gas compression, internal combustion engines, power from steam, gas turbine cycles and refrigeration. Real gases. The Maxwell equations. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

MECH 352 ***Heat Transfer I*** (3.75 credits)
Prerequisite: EMAT 311. Steady state and transient heat conduction, numerical methods for two-dimensional steady state heat conduction. Radiation heat exchange between black bodies, between grey bodies and from gases, vapours and flames. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 373 ***Instrumentation and Measurements*** (3.75 credits)
Prerequisite: ENGR 274. Unified treatment of measurement of physical quantities. Principle, characteristics, design and calibration of components and systems for measuring position, velocity, acceleration, force pressure, flowrate, temperature, proximity detection, etc. Background knowledge of electronics covering signal generation and processing. Concepts of accuracy and repeatability, linearity, response criteria, bandwidth, input and output impedance, matching of measuring systems, drift and bias. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 411 ***Design and Analysis of Mechanical Components*** (2.5 credits)
Prerequisite: MECH 311. Analytical review of current design practices and specification of standard components encountered in mechanical engineering. Introduction to overall system reliability estimates, interchangeability of mechanical devices and influence of stress-strength in determining the actual configuration of mechanical elements. Standard components covered include: various types of mechanical drives, cams, clutches, couplings, brakes, seals, fasteners, springs and bearings. Lectures: 2 hours per week. Tutorial: 2 hours per week. Laboratory: 2 hours per week, alternate weeks.

MECH 412 ***Computer Aided Mechanical Design*** (3.75 credits)
Prerequisite: MECH 313; MECH 411. Introduction to computer hardware, graphical input and output devices; computer-aided drawing; generation of points, vectors, 2D modeling, windowing, rotation, plane curves, 3D modeling and transformations; projections, space curves and surfaces, elimination of hidden lines and surfaces; orthographic and axonometric drawings; computer-aided linkage design; computer-aided design and analysis of machine elements; introduction to interactive graphics in CAD. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 421 ***Mechanical Shaping of Metals, Plastics and Composites*** (3.75 credits)
Prerequisite: MECH 221. Metal forming: extrusion, forging, rolling, drawing, pressing, compacting; shear line theory, sheet forming limits. Metal cutting, machinability, tooling. Plastics/Composites shaping: extrusion, pultrusion, molding, vacuum forming, lay-up, filament winding, laminating. Consideration of the mechanical parameters critical for process control and computer applications. Interaction of materials characteristics with processing to define product properties: cold working, annealing, hot working, super plasticity, thermomechanical treatment. Energy conservation, safety, product quality and liability. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 422 ***Mechanical Behaviour of Polymer Composite Materials*** (3 credits)
Prerequisite: ENGR 244; MECH 221. General applications of polymer composite materials in aircraft, aerospace, automobile, marine, recreational and chemical processing industries. Different fibres and resins. Mechanics of a unidirectional lamina. Transformation of stress, strain, modulus and compliance. Off axis engineering constants, shear and normal coupling coefficients. In plane and flexural stiffness and compliance with different laminates, including cross-ply, angle-ply, quasi isotropic, and general bidirectional laminates. Strength of laminates and failure criteria. Micromechanics. Lectures: 3 hours per week.

MECH 423 ***Casting, Welding, Heat Treating, and Non-Destructive Testing*** (3.75 credits)
Prerequisite: MECH 221. Comparative analysis of the various techniques of casting, welding, powder fabrication, finishing and non-destructive testing. Consideration of the control parameters that are essential to define both automation or robot application. Materials behaviour which determines product microstructure and properties. Technology and theory of solidification, normalizing, quenching, surface hardening, tempering, aging and thermomechanical processing for steels, cast irons and A1, Cu, Ni and Ti alloys. Energy conservation, worker safety, quality control and product liability. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

MECH 441 ***Mechanical Engineering Design*** (3 credits)
Prerequisite: ENGR 244; MECH 313; MECH 342. Concepts in design; failure of mechanical elements under dynamic loading; shafting; bolted and welded joints; anti-friction and journal bearings; design of gears. Lectures: 2 hours per week. Laboratory: 2 hours per week.

MECH 443 ***Mechanical Vibrations*** (3.75 credits)
Prerequisite: EMAT 311; ENGR 274; MECH 342. Transient vibrations under impulsive shock, and arbitrary excitation: normal modes, free and forced vibration. Multi-degree of freedom systems, influence coefficients, orthogonality principle, numerical methods. Continuous systems; longitudinal torsional and flexural free and forced vibrations of prismatic bars. Lagrange's equations. Vibration measurements. Lectures: 3 hours per week. Tutorial: 1 hour per week. Laboratory: 3 hours per week, alternate weeks.

MECH 445 ***Machine Design*** (3.5 credits)
Prerequisite: MECH 441. Design of springs; design of gear and hydraulic drives, design for hydrodynamics and hydrostatic lubrication; optimum design of mechanical systems, design strategy, value and merit function, maximizing and minimizing procedures. Laboratory work includes an advanced design project representative of those encountered in industry. Lectures: 2 hours per week. Laboratory: 3 hours per week.

MECH 446 ***Process Equipment Design*** (3 credits)
Prerequisite: MECH 321. Design of pressure vessels, towers, reactors, tanks, heat exchangers, piping systems, etc. as used in the petro-chemical, power generation, pulp and paper, and related industries. Compliance with pertinent codes and regulations: detailed analysis of shells, formed heads, flat closures; expansion stresses; wind and earthquake effects. Application to actual problems from industry. Lectures: 3 hours per week.

MECH 447 ***Fundamentals of Vehicle Systems*** (3 credits)
Prerequisite: MECH 441. Mechanics of tire-terrain interactions; braking and tractive performance; cornering properties of tires; traction and mobility of road and off-road vehicles; resistances to vehicle motion; tractive power; design of transmission systems; brake system design and braking; antilock braking systems; design of steering systems; steady state handling; steering response; directional response of vehicles with multiple steerable axles; handling of articulated vehicles; directional response of tracked vehicles; experimental methods in vehicle dynamics. Lectures: 3 hours per week.

MECH 452 ***Heat Transfer II*** (3.75 credits)
Prerequisite: ENGR 362; MECH 352. Review of momentum transfer, free and forced convection heat transfer, dimensional analysis as applied to convection heat transfer configurations, heat exchangers, introduction to mass transfer. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 453 ***Heating, Ventilation and Air Conditioning Systems*** (3 credits)
Prerequisite: MECH 352. Heating and cooling load calculation. Overview of heating and air conditioning systems. Review: Vapour compression refrigeration cycles, refrigerant properties, psychometrics. Performance characteristic of components: evaporators, condensers, compressors, throttling devices (expansion valves, capillary tubes). System performance characteristics: calculation of system operating conditions based on the capacities of its components and outdoor and indoor conditions. Controls: operational, capacity. Computer-aided design methods. Defrosting. Estimation of energy consumption for heating with heat pumps. Fundamentals of refrigerant piping, water piping, and air distribution systems. Experimental methods for system development. Lectures: 3 hours per week.

MECH 461 ***Gas Dynamics*** (3.75 credits)
Prerequisite: ENGR 362; MECH 351. Review of one-dimensional compressible flow. Normal and oblique shock waves; Prandtl-Meyer flow; combined effects in one-dimensional flow; non-ideal gas effects; multi-dimensional flow; linearized flow; method of characteristics. Selected experiments in supersonic flow, convergent-divergent nozzles, hydraulic analogue and Fanno tube. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 462 ***Turbomachinery and Propulsion*** (3 credits)
Prerequisite: ENGR 362; MECH 351. Overview of the gas turbine and its applications. Review of Brayton cycle and cycle modifications. Components arrangement; gas turbine cycles for propulsion. The Euler turbine equation, velocity triangles. Dimensional analysis of turbomachines. Two-dimensional cascades. Axial flow compressors, centrifugal compressors and axial flow turbines. Three-dimensional flow effects: radial equilibrium. Numerical solution of the radial equilibrium equation by finite differences and streamline curvature methods; design of turbomachines. Prediction of performance and off-design operation. Lectures: 3 hours per week.

MECH 463 ***Fluid Power Control*** (3.75 credits)
Prerequisite: ENGR 361; ENGR 372. Introduction to Fluid Power; pneumatic devices; fluidic devices; hydraulic system components; hydraulic and electro-hydraulic systems; dynamic performance of fluid power systems; fluid logic. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 464 ***Aerodynamics*** (3 credits)
Prerequisite: MECH 461. Theory of potential flow fields. Flows over immersed bodies, superposition of basic flows, method of source panels. Aerodynamic characteristics of isolated airfoils and of cascades of airfoils. The finite wing. Analytical and computational methods of subsonic and transonic flows over airfoils. Boundary layer effects and control. Lectures: 3 hours per week.

MECH 465 ***Gas Turbine Design*** (3.75 credits)
Prerequisite: MECH 462; MECH 464 concurrently. Study of practical criteria which influence the design of a gas turbine engine including relevant mechanical and aerodynamic constraints. The aerodynamics of each of the three major components of a modern turbo-fan engine, namely the compressor, the combustor and the turbine is considered. Air system acoustics, engine aerodynamic matching of components, and modern performance testing methods. A design project is assigned for each of these components. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 471 ***Microprocessors and Applications*** (3.75 credits)
Prerequisite: ELEC 318. Introduction to the concepts and practices of using microprocessors and

micro-computers in such applications as instrumentation, manufacturing, control and automation; architecture and programming techniques; interface logic circuits: I/O systems; case studies of engineering applications. Lectures: 3 hours per week. Laboratory: 3 hours per week, alternate weeks.

MECH 481 ***Design or Experimental Project*** (3 credits)
Prerequisite: Registration in final year. A mechanical engineering design, simulation or experimental project appropriate to the senior level carried out under the supervision of a faculty member. A complete report is required at the end of the project. Equivalent laboratory time: 6 hours per week.
NOTE: Not available for credit for students taking MECH 445.

MECH 498 ***Topics in Mechanical Engineering*** (3 credits)
Prerequisite: Permission of the Department Chair. This course may be offered in a given year upon the authorization of the Mechanical Engineering Department. The course content may vary from offering to offering and will be chosen to complement the elective courses available in a given option or options. Lectures: 3 hours per week.

71.80 Department of Computer Science

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IVAN FUCHS

Computer Science is the study and design of computer systems: hardware and software. Computer scientists are primarily concerned with the design of algorithms, languages, hardware architecture, systems software, applications software and tools. Applications range from simple game playing to the control of space vehicles, power plants and factories, from banking machines to intelligent fault and medical diagnosis. Computer professionals, in short, are concerned with the creation of computer and information systems for the benefit of society.

71.80.1 CURRICULUM FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE

The Computer Science programme emphasizes fundamentals and techniques that will provide the basis for the fast changing world of the future. It consists of a combination of core courses in Computer Science, programme courses attached to the options, and technical electives. The computer science core provides a basic and broad study of theory, programming methodology, computer architecture, systems architecture, data structures and databases, operating systems and software engineering. The "option" courses are designed to provide an integrated and yet specialized training in particular application areas of the discipline. Each option involves the study of selected advanced elective courses in Computer Science, as well as courses in other disciplines, to provide further depth in Computer Science and the particular application area.

The department offers the following five options: Information Systems, Software Systems, Systems Architecture, Theoretical Computer Science, and General Science. An Honours programme in Computer Science is also available. All options are offered in the co-operative format, alternating study and work terms, for a limited number of high-ranking students.

The **information systems option** focuses on the application of computers in business, with a special emphasis on databases, software engineering, and management information systems.

The **systems architecture option** focuses on aspects of the design of digital circuits, and their integration into computer architectures.

The **theoretical computer science option** focuses on numerical analysis and symbolic computation.

The **general science option** permits the student to define an area of speciality within the sciences.

The **software systems option** is concerned with the design and analysis of large-scale software systems.

71.80.2 DEGREE REQUIREMENTS

To be recommended for the degree of Bachelor of Computer Science, students must satisfactorily complete an approved programme of at least 90 credits comprising the courses of the Computer Science Core and those specified for their particular Option in accordance with the graduation requirements in §71.10.5.

Computer Science Core

This is composed of 4 required courses of 4 credits each, 5 courses of 3 credits and 2 courses of 2 credits each for a total of 35 credits.

COMP 215[2], 220[4], 231[3], 245[3], 326[3], 335[3], 346[4], 352[3], 353[4], 354[4] and ENCS 281[2]

1. Information Systems Option

NOTE: Admission profile is 10.12. Please refer to §71.10.2.

35 Computer Science Core
1 COMP 292 Language Laboratory -COBOL
9 Chosen from COMP 445[3], 451[3], 457[3], 458[3], 472[3], 474[3]
3 Elective Computer Science credits chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratory courses.
30 ACCO 213, 218, ECON 201, 203, FINA 214, MANA 266, MARK 213, DESC 243, 244, 250
6 Elective credits chosen from courses having prefixes ACCO, ECON, FINA, MANA, or MARK except ACCO 220, 221, MANA 211
6 Chosen from any department*

*See note following the description of the Software Systems Option.

2. Systems Architecture Option

NOTE: Admission profile is 10.10. Please refer to §71.10.2.

35 Computer Science Core
1 Language Laboratory
3 COMP 361
6 Two courses chosen from COMP 327[4], 421[4], 445[3], ENCS 455[4]
3 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
27 EMAT 212, 232, 252, 312, ENGR 273, 274, 371, ELEC 311
9 Chosen from ENCS 245, 456, ENGR 372, 471, ELEC 312, 341, 442, 461, 462
6 Chosen from any department.*

*See note following the description of the Software Systems Option.

3. Theoretical Computer Science

NOTE: Admission profile is 10.10. Please refer to §71.10.2.

35 Computer Science Core
1 Language Laboratory
3 COMP 361
6 Chosen from COMP 441[3], 465[3], 467[3]
3 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
18 MATH 242, 243, 262, 263, 282, 283
9 Mathematics credits chosen from one of the lists below*
9 Mathematics credits chosen from (a) 271 and (b) courses numbered from 312 through 397 and from 425 through 499
6 Chosen from any department**

*List 1 Discrete Mathematics: MATH 322, 381, 392, 393, 394, 432, 491, 492.
List 2 Numerical Methods and Operations Research: MATH 231, 312, 336, 337, 381, 432, 435, 436, 437.
List 3 Probability and Statistics: MATH 342, 343, 348, 351, 353, 448, 451, 454.

**See note following the description of the Software Systems Option.

4. General Science Option

NOTE: Admission profile is 10.10. Please refer to §71.10.2.

35 Computer Science Core
1 Language Laboratory
3 COMP 361
9 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
18 MATH 242, 243, 262, 263, 282, 283
18 Elective credits* chosen from:
a) those offerings of the Faculty of Arts and Science which are creditable towards a 90-credit BSc programme;
b) those offerings of the Faculty of Commerce and Administration which are creditable towards a 90-credit BComm or BAdmin degree;
c) those offerings of the Faculty of Engineering and Computer Science other than COMP 201;
d) other courses as authorized by the Office of the Associate Dean, in consultation with the Department.
6 Chosen from any department*

*See note following the description of the Software Systems Option.

5. Software Systems Option

NOTE: Admission profile is 10.10. Please refer to §71.10.2.

35 Computer Science Core
1 Language Laboratory
19 COMP 361[3], 442[3], 445[3], 446[3], 451[3], 465[3], 485[1]
5 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
18 MATH 242, 243, 262, 263, 282, 283
6 Elective credits* chosen from:
a) those offerings from the Faculty of Arts and Science which are creditable as science credits towards a 90-credit BSc programme;
b) those offerings of the Faculty of Commerce and Administration which are creditable towards a 90-credit BComm or BAdmin degree;
c) those offerings of the Faculty of Engineering and Computer Science other than COMP 201;
d) other courses as authorized by the Office of the Associate Dean, in consultation with the Department.
6 Chosen from any department*

*Students should note that certain courses are not creditable towards some 90-credit programmes, or cover certain material already found in the Computer Science or Option Cores. As such they are not recognized as electives. A listing of these exclusions and other information on choice of electives is found in the Faculty programme guide. Exceptions require the approval of the Dean's Office.

71.80.3 EXTENDED CREDIT PROGRAMME

Students admitted to an extended credit programme under the provisions of Sections 13.4.2 or 13.11 must successfully complete a minimum of 120 credits including:

90 Programme requirements as set out in Section 71.80.2
12 MATH 202^3, 203^3, 204^3, 205^3
3 COMP 201^3
15 Additional credits, as indicated below:

a) *Information Systems Option:*
15 elective credits chosen from outside the Faculty of Commerce and Administration and the Department of Computer Science.

b) *Other Options:*
CHEM 205^3
PHYS 204^3, 205^3, 224^1, 225^1 and at least 4 credits chosen from
BIOL 201^3
CHEM 206^3
ECON 201^3, 203^3
ESL 207^3, 208^3
PHYS 206^3, 207^3, 226^1

71.80.4 HONOURS PROGRAMME

Students should refer to Section 16.2.4 of the calendar for academic regulations for the Honours Programme. In addition the following regulations apply to the BCompSc programme.

1. Applications to enter an Honours programme must be submitted to the Office of the Associate Dean at least three months before the start of the term in which the student wishes to enter the programme.
2. Students must complete a minimum of 30 credits towards the degree after entering an Honours programme.
3. Each Honours student's programme, including electives, requires the approval of the student's Honours adviser prior to each registration.
4. Students must achieve an Annual Weighted Grade Point Average (WGPA) of at least 3.20 to remain in an Honours programme.
5. Students who are required to withdraw from an Honours programme may continue in the regular programme of their Option provided they are in Acceptable or Conditional Standing according to the academic regulations in 71.10.3.

Course Requirements for Honours Programmes

1. Honours in Information Systems

35 Computer Science Core
1 COMP 292
7 COMP 465, 490, 495
6 Chosen from COMP 445^3, 451^3, 457^3, 458^3, 472^3, 474^3
30 ACCO 213, 218, ECON 201, 203, FINA 214, MANA 266, MARK 213, DESC 243, 244, 250
6 Chosen from courses having prefixes ACCO, ECON, FINA, MANA or MARK except ACCO 220, 221, MANA 211
6 Chosen from any department*

*See note following the description of the Software Systems Option in 71.80.2.

2. Honours in Systems Architecture

35 Computer Science Core
1 Language Laboratory
7 COMP 465, 490, 495
3 COMP 361
3 Chosen from COMP 325^3, 427^3, 445^3, ENCS 455^4
27 EMAT 212^3, 232^3, 252^3, 312^3, ENGR $273^{3.75}$, $274^{3.75}$, 371^3, ELEC $311^{4.5}$
9 Chosen from ENCS 245^3, 456^3, ENGR $372^{3.75}$, $471^{3.75}$, ELEC $312^{4.5}$, 341^3, $442^{3.75}$, $461^{3.75}$, $462^{3.75}$
6 Chosen from any department*

*See note following the description of the Software Systems Option in 71.80.2.

3. Honours in Theoretical Computer Science

35 Computer Science Core
1 Language Laboratory
4 COMP 490, 495
3 COMP 361
6 Chosen from COMP 441^3, 465^3, 467^3
18 MATH 242, 243, 262, 263, 282, 283
9 Mathematics credits chosen from one list specified for the Theoretical Computer Science Option in 71.80.2
6 Chosen from MATH 271 and Mathematics courses numbered from 312 through 397 and from 425 through 499
3 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
6 Chosen from any department*

*See note following the description of the Software Systems Option in 71.80.2.

4. Honours in General Science

35 Computer Science Core
1 Language Laboratory
7 COMP 465, 490, 495
3 COMP 361
18 MATH 242, 243, 262, 263, 282, 283
3 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
18 Elective credits* chosen from:
a) those offerings of the Faculty of Arts and Science which are creditable as science credits towards a 90-credit BSc programme;
b) those offerings of the Faculty of Commerce and Administration which are creditable towards a 90-credit BComm or BAdmin degree;
c) those offerings of the Faculty of Engineering and Computer Science other than COMP 201;
d) other courses as authorized by the Office of the Associate Dean, in consultation with the Department.
6 Chosen from any department*

*See note following the description of the Software Systems Option in 71.80.2.

5. Honours in Software Systems

35 Computer Science Core
1 Language Laboratory
4 COMP 490, 495
19 COMP 361, 442, 445, 446, 451, 465, 485
18 MATH 242, 243, 262, 263, 282, 283
5 Chosen from COMP or ENCS courses numbered above 220 but including no more than two language laboratories
3 Elective credits* chosen from:
a) those offerings of the Faculty of Arts and Science which are creditable as science credits towards a 90-credit BSc programme;

b) those offerings of the Faculty of Commerce and Administration which are creditable towards a 90-credit BComm or BAdmin degree;

c) those offerings of the Faculty of Engineering and Computer Science other than COMP 201;

d) other courses as authorized by the Office of the Associate Dean, in consultation with the Department.

6 Chosen from any department*

*See note following the description of the Software Systems Option in 71.80.2.

71.80.5 MINOR IN COMPUTER SCIENCE

This programme is offered on both campuses.

NOTE: Admission profile is 10.12.

Minor in Computer Science

15 COMP 215, 220, 231, 245, 352

9 Computer Science electives, including at least one language laboratory.

71.80.6 PROGRAMMES IN MANAGEMENT INFORMATION SYSTEMS

Both major and minor programmes in Management Information Systems can be found in the Commerce and Administration Section of the Undergraduate Calendar, §61.

71.80.7 THE CO-OPERATIVE FORMAT

Director
GRAHAM MARTIN, *Associate Professor*

Students entering any option of the programme leading to the Bachelor of Computer Science degree may request permission to undertake their studies in the co-op format by following the application procedure specified in §31.515.

Academic content is identical to that of the regular programme, but six study terms are interspersed with four work terms.

Each student is supervised personally and must meet the requirements specified by the Faculty of Engineering and Computer Science and the Institute for Co-operative Education in order to continue their studies in the co-op format.

Liaison between the student, the employers and the Institute for Co-operative Education is provided by the Computer Science Co-op Committee, which includes the student's advisers.

Please refer to §31.515 for the schedule of study and work terms and the full description of admission requirements.

Please note that new course numbers have been implemented. For equivalent course numbers under the old system, please consult §200.6

COMP 201 ***Introduction to Computers and Computing*** (3 credits)

History of computers; survey of computer technology and application; introduction to hardware and software; problem solving and algorithms; data organization; programme design and development. A programming language will be introduced to develop and convey the above topics. Lectures: 3 hours per week. Tutorial: 1 hour per week.

NOTES: 1. Students who have received credit for COMP C211 may not take this course for credit.

2. This course may not be taken for credit in the regular undergraduate programmes in Engineering and Computer Science.

COMP 212 ***FORTRAN for Engineers and Scientists*** (3 credits)

Prerequisite: MATH 204 or CEGEP Mathematics 105; MATH 205 or CEGEP Mathematics 203. Note: It is also assumed that students have had some exposure to computers, either through a CEGEP course or through exposure to personal computers. A brief introduction to computers and computing systems. A thorough grounding in the use of FORTRAN 77 as a tool for the solution of engineering and scientific problems. Introduction to the principles of software engineering: problem specification, requirements analysis, programme design with emphasis on structured programming, testing and validation; programme documentation. Lectures: 3 hours per week. Tutorial: 1 hour per week.

NOTES: 1. Students having credit for a FORTRAN programming course from CEGEP with a mark of at least 85% may, during the first two weeks of the course, apply to the course coordinator to undertake a FORTRAN programming project appropriate to their field of study in lieu of the normal requirements of the course.

2. Students in the BCompSc programme may not take this course for credit.

COMP 215 ***Introduction to Computer Science*** (2 credits)

Prerequisite: Registration in the B.Comp.Sc. programme. Problems and Problem Solving:; Algorithms and Heuristics; a high-level language (Pascal) — Basic structure and layout, Control structures, Modules, Structured data types. Lectures: 2 hours per week. Tutorial: 1 hour per week.

NOTES: 1. Students may apply for exemption in this course if they have had sufficient experience in an earlier course in the high-level language used (Pascal). An examination may be required to verify the level attained.

2. If exempt, the student must take equivalent credits in a Computer Science elective.

3. Students who have received credit for COMP 244 or COMP 291 may not take this course for credit.

COMP 220 ***Computer Organization and Assembly Language*** (4 credits)

Prerequisite: COMP 215; COMP 231. Basic features of the assembly language and instruction set level description of a selected contemporary computer. Principles of computer organization including the memory, CPU and I/O subsystems. Representation of integers, ASCII characters and IEEE floating point format, instruction sequencing, addressing modes, and instruction interpretation. Semiconductor RAM,

ROM and DISK memories including address decoding. Input output techniques—polling, DMA and I/O channel concepts. Lectures: 3 hours per week. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 224 or COMP 285 may not take this course for credit.

COMP 224 ***Introduction to Systems Programming*** (3 credits)
Prerequisite: COMP 244; COMP 285. Basic machine organization, data representation, instruction sets. The assembly and execution process, macros and macroprocessing. Input/output processing. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 231 ***Introduction to Discrete Structures*** (3 credits)
Prerequisite: MATH 204 (CEGEP Mathematics 105). Set theory, relations, propositional logic and proofs, algebraic structures, graphs, lattices and Boolean algebra, enumeration. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 244 ***Programming Methodology*** (3 credits)
Prerequisite: MATH 205 (CEGEP Mathematics 203); COMP 231 or COEN 231 previously or concurrently; COMP 291 previously or concurrently. Basic concepts of Computer Science. Problem-solving techniques, algorithm specification and development. Programme structures: procedures, data types, coding. Programming style, debugging, documentation. Lectures: 3 hours per week. Tutorial: 1 hour per week.
NOTE: Students required to complete COMP 245 may not take this course for credit.

COMP 245 ***Programming Methodology*** (3 credits)
Prerequisite: COMP 215; COMP 231 previously or concurrently. Expressions, functions, and recursion. Commands sequences and assignments. Loops and iteration. Proof techniques for programmes. Simple and recursive data structures. Arrays. Programme development and documentation. Lecture: 3 hours per week. Tutorial: 1 hour per week.

COMP 251 ***Introduction to Business Programming*** (3 credits)
Prerequisite: CEGEP 420-911 or equivalent. Introduction to business data processing. Basic file organization and handling, record layouts, elementary information storage and retrieval. Detailed specifications of the Common Business Oriented Language (COBOL). Structured programming concepts will be emphasized. This course will include programming assignments involving basic business applications, to be prepared, tested and documented individually. Lectures: 3 hours per week. Tutorial: 1½ hours per week.
NOTE: Restricted to students registered in a Commerce and Administration programme.

COMP 285 ***Systems Programming Laboratory I*** (1 credit)
Prerequisite: COMP 224. Use of assemblers, syntax of an assembler language, use of debuggers, input/output programming, interrupts. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 291 ***Language Laboratory — Pascal*** (1 credit)
Prerequisite: COMP 244 previously or concurrently or COMP 212 previously. Use of computer system. Syntax and semantics of the programming language Pascal. The design, development, and documentation of programmes. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students required to complete COMP 245 may not take this course for credit.

COMP 292 ***Language Laboratory — COBOL*** (1 credit)
Prerequisite: COMP 244 or COMP 245. Use of computer system. Syntax and semantics of the programming language COBOL. The design, development, and documentation of programmes. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 293 ***Language Laboratory — FORTRAN*** (1 credit)
Prerequisite: COMP 244 or COMP 245. Use of computer system. Syntax and semantics of the programming language FORTRAN. The design, development, and documentation of programmes. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 294 ***Language Laboratory — LISP*** (1 credit)
Prerequisite: COMP 245 or (COMP 244 and COMP 291). Syntax and semantics of the programming language LISP. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 391 may not take this course for credit.

COMP 295 ***Language Laboratory — PL/I*** (1 credit)
Prerequisite: COMP 245 or (COMP 244 and COMP 291). Syntax and semantics of the programming language PL/I. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 392 may not take this course for credit.

COMP 296 ***Language Laboratory — APL*** (1 credit)
Prerequisite: COMP 245 or (COMP 244 and COMP 291). Syntax and semantics of the programming language APL. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 393 may not take this course for credit.

COMP 297 ***Language Laboratory — Ada*** (1 credit)
Prerequisite: COMP 245 or (COMP 244 and COMP 291). Syntax and semantics of the programming language Ada. Projects requiring the proper choice of data structures, control structures, and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 394 may not take this course for credit.

COMP 298 ***Language Laboratory — C*** (1 credit)
Prerequisite: COMP 245 or (COMP 244 and COMP 291). Syntax and semantics of the programming language C. Projects requiring the proper choice of data structures, control structures and tools of software design. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 325 ***Digital System Design*** (3 credits)
Prerequisite: COMP 224; COMP 231; COMP 285; COMP 386 previously or concurrently. Reduction of Boolean expressions. Digital integrated circuits. Combinatorial circuits. Sequential logic, counters, shift registers. Microprocessors. Interfacing with external devices. Lectures: 3 hours per week.

COMP 326 ***Computer Architecture*** (3 credits)
Prerequisite: COMP 346 previously or concurrently or COMP 343 previously. Classification schemes. Functional units, bussing systems and input/output structures, storage systems, instruction sets. Microprogramming. Survey of different kinds of computer architectures. Software influences on architecture. Advanced topics in computer architecture. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 327 ***Digital System Design*** (4 credits)
Prerequisite: COMP 224 and COMP 285, or COMP 220. Reduction of Boolean expressions. Digital integrated circuits. Combinatorial circuits. Sequential logic, counters, shift registers. Microprocessors. Interfacing with external devices. Lectures: 3 hours per week. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 325 or COMP 386 or COEN 312 may not take this course for credit.

COMP 335 ***Introduction to Theoretical Computer Science*** (3 credits)
Prerequisite: COMP 231 or COEN 231; COMP 245 or (COMP 244 and COMP 291). Finite state automata, context free grammars, push-down automata, LL(1) and LR(1) parsing, Turing machines, computability and complexity theory, formal methods of programme specification, programme testing, and programme verification. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 343 ***Operating Systems*** (3 credits)
Prerequisite: COMP 385. Operating system evolution and services. Process management: concept of processes, concurrent languages, process states, process communication, operating system structure, processor scheduling, monitors. System management: Virtual memory, resource allocation, queue management, communication with peripherals, exception handling. File systems. Interactive computation. Protection. Distributed systems. Lectures: 3 hours per week.

COMP 346 ***Operating Systems*** (4 credits)
Prerequisite: COMP 352; COMP 220 or COMP 224 or COEN 311. Operating system evolution and services. Process management: concepts of processes, concurrent languages, process states, process communication, operating system structure, processor scheduling, monitors. System management: Virtual memory, resource allocation, queue management, communication with peripherals, exception handling. File systems. Interactive computation. Protection. Distributed systems. Lectures: 3 hours per week. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students who have received credit for COMP 343 or COMP 385 may not take this course for credit.

COMP 352 ***Data Structures and Algorithms*** (3 credits)
Prerequisite: COMP 231 or COEN 231; COMP 245 or (COMP 244 and COMP 291). This course will emphasize the definition, usage, and manipulation of fundamental data structures and their associated algorithms: stacks and queues, trees, tables, lists, arrays, strings, sets. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 353 ***Files and Databases*** (4 credits)
Prerequisite: COMP 352. Files and access methods: Physical and logical organization, access methods, basic files, external sorting, B-trees, multi-key organizations. Classical database management: Modelling, data integrity, data independence and security, ANSI/SPARC architecture, data models (relational, hierarchical and network), database design, detailed study of the relational model. Lectures: 3 hours per week. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 354 ***Software Engineering*** (4 credits)
Prerequisite: COMP 335; COMP 353. Scientific principles and managerial guidelines for software construction; comparative study of software life cycle models; software requirements analysis and specification methods; software design concepts, aids, and tools. Alternate approaches to software design — prototyping, executable specification and object oriented design; software testing, verification, and validation methods; reliability of embedded systems. Lectures: 3 hours per week. Laboratory: 2 hours per week. Tutorial: 1 hour per week.
NOTE: Students having completed COEN 431 may not take this course for credit.

COMP 361 ***Elementary Numerical Methods*** (3 credits)
Prerequisite: COMP 231; COMP 245 or (COMP 244 and COMP 291). Error analysis and computer arithmetic. Numerical methods for solving linear systems, Gaussian elimination, LU decomposition. Numerical solution of non-linear equations, fixed point iterations, rate of convergence. Interpolations and approximations, Lagrange polynomials, divided differences, discrete least-square approximation, Legendre polynomials. Numerical integration, Newton-Cotes formulas, Romberg integration. Emphasis will be on the development of efficient algorithms. Lectures: 3 hours per week. Tutorial: 1 hour per week.

COMP 362 ***Computer Applications of Statistics*** (3 credits)
Prerequisite: COMP 293 or COMP 212; EMAT 271 or MATH 243 or DESC 244 or ENGR 371. This course is designed to familiarize the student with the application of computers to statistical problems. Computer terminals and batch processing of Fortran programmes are used to develop a working knowledge of standard programmes for control charts, analysis of experimental design, sampling plans, forecasting, and statistical analysis common to many other fields. Students are expected to be familiar with elementary statistics and to be able to programme in Fortran. Lectures: 3 hours per week.

COMP 385 ***Systems Programming Laboratory II*** (1 credit)
Prerequisite: COMP 343. Development of systems software (e.g., linkage editor, loader, etc.). Implementation of scheduling algorithms and protection schemes. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 386 ***Microprocessor Laboratory I*** (1 credit)
Prerequisite: COMP 325 previously or concurrently. Combinatorial and sequential logic design. Basic microprocessor interfacing. Laboratory: 2 hours per week. Tutorial: 1 hour per week.

COMP 421 ***Microprocessor Systems Architecture*** (4 credits)
Prerequisite: COMP 327 or: (COMP 325 and COMP 386). Microcomputer families. Memory interface. I/O systems. Peripheral control. Single-chip microprocessors. Coprocessors. System busses. Board level design. Multicomputer systems. Communication architecture. Lectures: 3 hours per week. Laboratory: 2 hours per week.
NOTE: Students who have received credit for COMP 427 or COMP 486 may not take this course for credit.

COMP 427 ***Microprocessor Systems Architecture*** (3 credits)
Prerequisite: COMP 486. Microcomputer families. Memory interface. I/O systems. Peripheral control. Single-chip microprocessors. Coprocessors. System busses. Board level design. Multicomputer systems. Communication architecture. Lectures: 3 hours per week.

COMP 441 ***Comparative Study of Programming Languages*** (3 credits)
Prerequisite: COMP 352; COMP 294 previously or concurrently. This course introduces programming language design and supporting run-time structures. Some recent languages (functional, relational, and concurrent) which are substantially different from conventional languages will be chosen for discussion. Lectures: 3 hours per week.

COMP 442 ***Compiler Design*** (3 credits)
Prerequisite: COMP 220 or COEN 311 or (COMP 224 and 285); COMP 335; COMP 352. Compiler organization and implementation. Programming language constructs, their syntax and semantics. Syntax directed translation, code optimization. Run-time organization of programming languages. Lectures: 3 hours per week.
NOTE: Students who have received credit for COMP 342 may not take this course for credit.

COMP 444 ***System Software Design*** (4 credits)
Prerequisite: COMP 298; COMP 346 or (COMP 343 and COMP 385). Detailed examination of data structures and algorithms of a contemporary operating system: File system, processes, memory management, device management. Comparison of techniques used with those employed in other operating systems. Lectures: 3 hours per week. Laboratory: 2 hours per week.
NOTE: Students who have received credit for COMP 423 or COMP 446 or COMP 485 may not take this course for credit.

COMP 445 ***Data Communication and Computer Networks*** (3 credits)
Prerequisite: COMP 346 or (COMP 343 and COMP 385). The study of remote access to and communications between computers. Network architectures and topology; communication protocols and interfaces, functional layers; transmission facilities including communications equipment, line utilization, switching, and error handling; standard protocols; network interfaces including routing and flow control; point-to-point, broadcasting, and local networks theory and current practice; high-level protocols; reliability and security, encryption. Lectures: 3 hours per week.
NOTE: Students with credit for COMP 372 or 373 may not take this course for credit.

COMP 446 ***System Software Design*** (3 credits)
Prerequisite: COMP 485. Detailed examination of data structures and algorithms of a contemporary operating system: File System, Processes, Memory Management, Device Management. Comparison of techniques used with those employed in other operating systems. Lectures: 3 hours per week.
NOTE: Students who have received credit for COMP 423 may not take this course for credit.

COMP 451 ***Database Design*** (3 credits)
Prerequisite: COMP 353. Review of the relational data model, and introduction to distributed databases. DBMS architectures. Data dependencies, decomposition algorithms. Data dictionaries. Concurrency, integrity, security and reliability issues. Query decomposition, optimization and evaluation strategies. Physical database design. Lectures: 3 hours per week.

COMP 456 ***Information Retrieval*** (3 credits)
Prerequisite: COMP 353. The basic problems of information retrieval. Application of information theory to text processing and storage. Application of file and database techniques for text storage and retrieval. Question logic and processing considerations. Free text search algorithms. Measures of retrieval effectiveness. Lectures: 3 hours per week.

COMP 457 ***Office Automation*** (3 credits)
Prerequisite: COMP 352. Design of an office automation system. Technical aspects of some office functions. Petri nets. Communication networks. Interface design. Security and cryptography. Future developments. Lectures: 3 hours per week.

COMP 458 ***Structure of Information Systems*** (3 credits)
Prerequisite: COMP 353. Information systems and organizations. Representation and analysis of system structure. Decision theory. Information system applications. Information centres. System evaluation and selection. Lectures: 3 hours per week.

COMP 463 ***Discrete System Simulation*** (3 credits)
Prerequisite: COMP 245 or (COMP 244 and COMP 291); EMAT 271 or MATH 243 or DESC 244 or ENGR 371. Discrete random variables and their distributions. A comparison of simulation techniques: discrete, continuous and hybrid. Queueing models, analysis of data. Model building. Review of simulation languages. Application to business problems and operations research. Lectures: 3 hours per week.
NOTE: Students with credit for COMP 475 may not take this course for credit.

COMP 465 ***Design and Analysis of Algorithms*** (3 credits)
Prerequisite: COMP 335; COMP 352. Empirical and theoretical measures of the efficiency of algorithms. Algorithm design techniques. A study of good algorithms related to set operations, sorting and graph theory. A survey of hard problems, NP-completeness, and intractable problems. Lectures: 3 hours per week.

COMP 467 ***Introduction to Symbolic and Algebraic Computation*** (3 credits)
Prerequisite: COMP 335; COMP 352. Comparison, familiarization and use of several symbolic systems and languages (such as MACSYMA, MU-MATH, REDUCE, SAC). Symbolic algebra, factorization, integral and differential calculus, method of homomorphism. Lectures: 3 hours per week.
NOTE: Students who have received credit for COMP 437 may not take this course for credit.

COMP 469 ***Performance Modelling of Computer Systems*** (3 credits)
Prerequisite: COMP 346 or COMP 343; EMAT 271 or MATH 243 or DESC 244 or ENGR 371. Review of elements of probability theory and statistics. Random variable generation. Reliability of computer systems. Review of basic results in queueing theory. Analysis and simulation of computer systems. Application of queueing models to performance modelling of computer systems. Lectures: 3 hours per week.

COMP 471 ***Computer Graphics*** (4 credits)
Prerequisite: COMP 326 or COEN 416; COMP 352. Display memory; generation of points, vectors, etc. Interactive versus passive graphics; CRT devices and plotters, analog storage of images. Digitizing and digital storage. Pattern recognition. Data structures and graphics software. The mathematics of three-dimensional transformations; projections. Applications in computer-aided design and instruction. Lectures: 3 hours per week. Laboratory: 2 hours per week.

COMP 472 ***Introduction to Artificial Intelligence*** (3 credits)
Prerequisite: COMP 294; COMP 353 previously or concurrently. Scope of AI. Knowledge representation and inference using predicate calculus and semantic networks. List processing. Heuristic programming: state-space search and problem-reduction strategies. Other topics include: Game heuristics; symbolic pattern matching; AI production systems; natural language processing; study of a large AI system. Lectures: 3 hours per week.

COMP 473 ***Pattern Recognition*** (3 credits)
Prerequisite: COMP 352. Optical character recognition; sequential and parallel recognition methods; Bayesian decision procedures; perceptrons; statistical and syntactic approaches; recognition grammars; feature extraction and selection, scene analysis. Lectures: 3 hours per week.

COMP 474 ***Introduction to Expert Systems*** (3 credits)
Prerequisite: COMP 352. Basic concepts and techniques. Knowledge representation in inferencing. Building a small expert system. Knowledge engineering and large system development. Survey of tools and expert systems. The expert system market. Lectures: 3 hours per week.

COMP 485 ***Systems Software Laboratory*** (1 credit)
Prerequisite: COMP 446. Shell Language. Systems programming language. Design of high- and low-level utilities. Device driver design. System configuration. Laboratory: 2 hours per week.

COMP 486 ***Microprocessor Laboratory II*** (1 credit)
Prerequisite: COMP 427. Design and implementation of dedicated hardware and software for microprocessor and single-chip microcomputer applications. Laboratory: 2 hours per week.

COMP 490 ***Computer Science Project I*** (3 credits)
Prerequisite: Completion of 60 credits. Students will work on a computer science project under the supervision of a faculty member and submit a suitable written report on the work carried out. Students planning to register for this course should consult with the department prior to registration in the final year of study.

COMP 492 ***Computer Science Project II*** (3 credits)
Prerequisite: COMP 490 previously or concurrently. Students having permission of the department to carry out a major project will register for both COMP 490 and 492. Alternatively, they may carry out a second smaller project.

COMP 495 ***Honours Seminar*** (1 credit)
Prerequisite: Registration in final year of the Honours programme. Students are required to attend a required number of Departmental seminars (initially 10) and submit a written report on one of them. There will be an administrator in charge of this course.

71.90 Certificate Programme in Quality Control

The programme leading to the Certificate in Quality Control is offered at the Loyola Campus, in the evening only.

71.90.1 ADMISSION REQUIREMENTS

Applications for admission to the certificate programme in Quality Control are submitted to the Admissions Office.

General Admission requirements are listed in §13.

Special requirements are a Diploma of Collegial Studies, or its equivalent, including the CEGEP courses Mathematics 103, 105 and 203, or their equivalents. (Profile 10.12).

Students entering the certificate programme in Quality Control are presumed to have acquired some familiarity with computers and programming, either through a course or through time spent working with a personal or other computer.

71.90.2 CURRICULUM FOR THE CERTIFICATE IN QUALITY CONTROL

To be recommended for the award of the Certificate in Quality Control, students must satisfactorily complete the programme of 48 credits specified below in accordance with the graduation requirements specified in §71.10.5. The courses offered in the programme will provide the student with an in-depth understanding and working knowledge of the principles and practices used in the rapidly expanding field of quality control.

The programme is fully endorsed by the Montréal Section of the American Society for Quality Control (ASQC). It has been designed in keeping with the requirements stipulated by the Education Institute of the ASQC headquarters and, as such, does much to prepare candidates for the ASQC Quality Engineer Certificate examinations. It should be noted, however, that the certificate programme does not lead to admission to the Order of Engineers of Québec, or to the legal use of the title Engineer.

71.90.3 ACADEMIC REGULATIONS

Students are subject to the academic regulations specified in §71.10.3.

71.90.4 COURSE REQUIREMENTS

To be recommended for the award of the Certificate, students must satisfactorily complete the following courses:

QUAL 200	Elementary Metrology
QUAL 201	Advanced Metrology
QUAL 202	Statistical Quality Control
QUAL 203	Statistical Sampling
QUAL 204	Basic Concepts of Reliability
QUAL 205	Advanced Reliability
QUAL 206	Quality Management
QUAL 207	Design of Experiments
QUAL 208	Quality Assurance Technology
QUAL 209	Product Cost Control
QUAL 210	Computer Applications of Statistics
COMP 212	FORTRAN for Engineers and Scientists

3 elective credits from Computer Science or Decision Sciences and Management Information Systems.

Course descriptions are given below, except for electives and COMP 212, which may be found in the Computer Science, and Decision Sciences and Management Information Systems sections of the calendar.

Please note that new course numbers have been implemented. For equivalent course numbers under the old system, please consult §200.6.

QUAL 200 ***Elementary Metrology*** (3 credits)

Prerequisite: MATH 204; MATH 205 (CEGEP Mathematics 105 and 203). An introductory course dealing with general measurement concepts, methods for estimating accuracy, systematic and constant errors. Included are: mathematical bases of metrology, statistical analysis of measurement, master standards, principles involved in the use of projectors, pneumatic comparators, and direct reading measuring machines.

QUAL 201 ***Advanced Metrology*** (3 credits)

Prerequisite: QUAL 200; QUAL 202. This course applies the principles presented in Elementary Metrology, and explores the value of these principles through everyday applications to modern technology.

Special consideration is given to the "Système International" (Modernized Metric System) and its influence on industry (including the use of conversion tables and formulae).

The course treats non-destructive testing techniques and their applications, including (in some depth) radiographic, ultrasonic and nucleonic gauging and measurement.

QUAL 202 ***Statistical Quality Control*** (3 credits)

Prerequisite: MATH 204; MATH 205 (CEGEP Mathematics 105 and 203). Techniques for establishing, monitoring and maintaining process control of manufactured products. A workshop course with full student

participation in solving a variety of practical statistical quality control problems. Discussed are the concept of variation, frequency distributions, functions of a frequency distribution, the various types of control charts including those for attributes and variables data, analysis of patterns, process capability studies and other related topics.

QUAL 203 ***Statistical Sampling*** (6 credits)

Prerequisite: QUAL 202. Statistical sampling theory and its application to quality control. Also discussed in lecture workshop/sessions are risks for producer and consumer.

Topics include elements of probability theory; the binomial; Poisson, and hyper-geometric distribution; sampling theory; sampling plans, classification of sampling plans — AQL, AOQL and LTPD, types of sampling plans within each classification, such as single, double, multiple, unit sequential, and continuous plans and their associated operating characteristic curves. MIL-STD-105D and MIL-STD-414 are discussed in detail and the Dodge and Romig tables are highlighted.

QUAL 204 ***Basic Concepts of Reliability*** (3 credits)

Prerequisite: QUAL 202. A mixed format of lectures, workshops, problems and discussions designed to familiarize the student with the basic principles of reliability. Building gradually from historical review, definitions and concepts, the course discusses probability theory, Poisson and exponential distributions, reliability equation, MTBF and failure rate concepts, Weibull analysis, mean and median ranks, confidence statements, life characteristic curves, system reliabilities, standby systems, associated problems and other related topics.

QUAL 205 ***Advanced Reliability*** (3 credits)

Prerequisite: QUAL 202; QUAL 204. Statistical methods in life testing. Introduction, reliability concepts and definitions, historical review and development. Life characteristic curve, Poisson and exponential distributions, exponential reliability equation, MTBF and failure rate concepts.

Chi square confidence statements and intervals, Weibull analysis, mean and median ranks, associated problems. Probability theory, system reliabilities, standby systems, and other related topics.

QUAL 206 ***Quality Management*** (3 credits)

Prerequisite: MATH 204; MATH 205 (CEGEP Mathematics 105 and 203). Emphasis is on general principles of planning and management rather than quality control methodology. The concept of total quality control, from design, development and manufacture to customer use, is developed.

The economics of quality, the planning and implementation of a quality cost programme, organization for quality, procurement quality control, in-process control, motivation for quality, value engineering, system quality audit, customer feedback and product liability are topics treated in detail.

QUAL 207 ***Design of Experiments*** (6 credits)

Prerequisite: QUAL 202. An introductory course, providing a more systematic approach to experimentation with emphasis on the use of statistical designs for data interpretation and known confidence in the result and overall costs.

The course covers: tests of hypotheses, F, t, and X^2 tests, analysis of variance, goodness of fit tests, use of probability paper, and control chart analysis of experimental results. Also included are experimental design methods such as: full and fractional factorial designs, regression analysis, multiple and random balance designs, latin square, cube and nested designs, etc.

QUAL 208 ***Quality Assurance Technology*** (6 credits)

Prerequisite: QUAL 202. The basic principles of quality assurance, and its definition as a planned and systematic pattern of actions necessary to provide adequate confidence that a product or service conforms to established requirements. The development of the individual quality system in a modular format to cover the various phases of the industrial and commercial enterprise. Topics include: development of Quality Organizations, systems engineering, closed loop feedback systems, principle of modular systems, what the customer expects versus what he or she gets, development of quality product, computer software QA, product safety and reliability, vendor-vendee relations, manufacturing, processing and post-production servicing.

QUAL 209 ***Product Cost Control*** (3 credits)

Prerequisite: MATH 204; MATH 205 (CEGEP Mathematics 105 and 203). This course introduces the student to product cost control and related areas. Topics include introductions to: accounting, procedures, cash flow, budgeting, capital equipment costing and amortization, product costing, cost of quality control systems ("quality costs"). Lectures: 3 hours per week.

QUAL 210 ***Computer Application of Statistics*** (3 credits)

Prerequisite: QUAL 203; COMP 212. This course is designed to familiarize the student with the application of computers to statistical problems. Fortran programmes are used to develop a working knowledge of standard programmes for control charts, analysis of experimental design, sampling plans, forecasting and statistical analysis common to many other fields. *NOTE A/See §200.6*

SECTION 81

FACULTY OF FINE ARTS

81.10 PROGRAMMES AND ADMISSION REQUIREMENTS
- 81.10.1 Applicants from Quebec Institutions
- 81.10.2 Transfer Students
- 81.10.3 Mature Entry
- 81.10.4 Extended Credit Programme
- 81.10.5 Portfolio Evaluation Committee

81.20 DEGREE REQUIREMENTS
- 81.20.1 BFA Degree Requirements
- 81.20.2 Residence Requirements
- 81.20.3 Course Load
- 81.20.4 Academic Performance Requirements

81.30 FACULTY OF FINE ARTS PROGRAMMES AND COURSES

81.40 INTER-RELATED ARTS

81.50 ART EDUCATION AND ART THERAPY

81.60 ART HISTORY

81.70 CINEMA

81.80 CONTEMPORARY DANCE

81.90 DESIGN ART

81.100 MUSIC

81.110 PAINTING AND DRAWING

81.120 PRINTMAKING AND PHOTOGRAPHY

81.130 SCULPTURE, CERAMICS AND FIBRES

81.140 THEATRE

81 Faculty of Fine Arts

Dean
ROBERT J. PARKER

Associate Dean
BARBARA MACKAY, *Academic Programmes*

Assistant Deans
ROBERT BIGELOW, *Physical Resources*
KATHERINE TWEEDIE, *Student Affairs*

The Faculty of Fine Arts has two divisions, comprising ten departments offering numerous programmes.

The PERFORMING ARTS DIVISION consists of the departments of:

	Calendar Section
Contemporary Dance	81.80
Music	81.100
Theatre	81.140

The VISUAL ARTS DIVISION consists of the following seven departments:

Art Education and Art Therapy	81.50
Art History	81.60
Cinema	81.70
Design Art	81.90
Painting and Drawing	81.110
Printmaking and Photography	81.120
Sculpture, Ceramics and Fibres	81.130

Programmes offered:
For information concerning any of the following programmes, please consult the calendar section listed opposite each programme.

	Calendar Section
Specializations:	
Art Education	81.50
Design for the Theatre: Conception and Realization	81.140
Drama in Education	81.140
Film Production	81.70
Film Studies	81.70
Jazz Studies	81.100
Music Performance Studies	81.100
Music Theory/Composition	81.100
Playwrighting (English and Theatre)	81.140
Selected Music Studies	81.100
Theatre Performance	81.140
Majors:	
Art Education	81.50
Art History	81.60
Art History and Studio Art	81.60, 81.110, 81.120, 81.130
Integrative Music Studies	81.100
Inter-Related Arts	81.40
Ceramics	81.130
Cinema	81.70
Design Art	81.90
Fibres	81.130
Film Production	81.70
Film Studies	81.70
Painting and Drawing	81.110
Photography	81.120
Printmaking	81.120
Sculpture	81.130
Studio Art	81.110, 81.120, 81.130
Theatre	81.140

Minors:

Archaeology; Art History	81.60
Art History and Studio Art	81.60, 81.110, 81.120, 81.130
Cinema; Film Animation; Film Studies	81.70
Music	81.100
Photography	81.120
Theatre	81.140
Women and the Fine Arts	81.50

81.10 Programmes and Admission Requirements

General admission requirements are listed in §13. In addition, the following specific requirements exist for the various programmes.

81.10.1 APPLICANTS FROM QUEBÉC INSTITUTIONS

In addition to successful completion of a two-year pre-university CEGEP programme (or equivalent), some programmes have distinct requirements as follows:

1. There are no specific courses or procedures required for the Major and Minor in Art History and the Minor in Archaeology.
2. Applicants to the Major in Inter-Related Arts and the Minor in Women and the Fine Arts must submit a *letter of intent* with their application.
3. Applicants to specializations in Drama in Education and Theatre Performance; majors in Contemporary Dance and Integrative Music Studies; and the minors in Music and Theatre are required to attend an *interview and audition* as part of the admission process. These applicants must contact the relevant Department for appointments.
4. Applicants to the Major in Cinema, the Major in Photography, the Specialization in Design for the Theatre, Specialization in Film Production, Specialization and Minor in Film Studies, Joint Specialization in Playwrighting (English and Theatre) must submit a *portfolio* as well as attend an *interview and audition*. Applicants must contact the relevant Department for particulars regarding portfolio submissions and auditions.
5. Applicants to the specializations in Music, Jazz Studies, Music Performance Studies, Music Theory/Composition and Selected Music Studies must attend an *interview and audition*. In addition they are required to have successfully completed at least six courses in music (10.7 profile) in their CEGEP programme. Applicants without this profile but with alternate background in music are also considered for admission. All applicants to these specializations must contact the Department of Music to make arrangements for their interview and audition.
6. Applicants to the Major in Theatre must attend an *interview and audition* and submit a *letter of intent*. Applicants must contact the Department of Theatre for particulars.
7. Applicants to the studio arts programmes: Majors in Art History and Studio Art; Ceramics; Design Art; Fibres; Painting and Drawing; Printmaking; Sculpture; Studio Art are required to submit a *portfolio* of their own work (see §81.10.5). Accepted applicants who have the *CEGEP 10.6 profile* (studio art courses 110, 210, 310, 320) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may be granted exemption if the quality and range of their portfolio submissions are of exceptional merit.
   Applicants to the Major in Design Art and the Major in Painting and Drawing require *interviews and letters of intent* as well as portfolio submissions (see §81.90.1.)
8. Applicants to the Specialization and Major in Art Education and the Minor in Art History and Studio Art require the *CEGEP 10.6 profile* (studio art courses 110, 210, 310, 320). Applicants who have the CEGEP 10.6 profile (studio art courses 110, 210, 310, 320) are automatically exempt from Art 200, Studio Art I. Applicants who do not have this profile but have a background in studio arts are required to submit a *portfolio* (see §81.10.5) requesting exemption for Art 200. Accepted applicants without exemption for Art 200 are required to complete this course during their first year as part of their programme requirements.

81.10.2 TRANSFER STUDENTS

Applicants who have completed courses in other colleges or universities are granted credits (advanced standing) on the basis of the programmes at Concordia University. Applicants follow the same admission procedures as those from Québec institutions (see §81.10.1 above).

Applicants to a second Bachelor's degree must complete a minimum of 60 credits, other than those credited towards the first degree, at least 36 of which must be taken in the new field of specialization (§16.1.5). Students transferring credits towards a first degree must complete a minimum of 45 credits at Concordia (see §16.1.5).

Students must complete all programme and degree requirements, as well as the Faculty of Fine Arts residence requirements (see §81.20.2).

81.10.3 MATURE ENTRY

General admission requirements to the 108-credit programme (Mature Entry) are listed in §14.

Students admitted into the Faculty of Fine Arts through the Mature Entry plan are required to complete 18 credits in addition to the 90 credits normally required for the BFA degree. Fine Arts students are required to complete 18 credits appropriate for entry into the student's ultimate area of concentration and chosen with the approval of a Faculty adviser.

81.10.4 EXTENDED CREDIT PROGRAMME

Definition of the Extended Credit Programme is listed in §13.2. Students admitted to an Extended Credit Programme in Fine Arts are required to complete 120 credits for the degree, that is, 30 additional credits. A maximum of 18 of these 30 credits may be selected from courses offered in the Faculty of Fine Arts which are appropriate for entry into the student's area of concentration and chosen with the approval of a Faculty adviser. The remaining 12 credits are selected from other introductory level courses in other faculties. A listing of the courses in Fine Arts which may be applied towards the Extended Credit Programme is available in the Office of Student Affairs, Faculty of Fine Arts.

81.10.5 PORTFOLIO EVALUATION COMMITTEE

In addition to admission portfolio committees in each of the studio art departments, there is a Portfolio Evaluation Committee which reviews the portfolios of applicants to all studio art programmes who have not completed the required 10.6 profile in the CEGEP. Applicants without the 10.6 profile are normally required to complete Art 200, however, they may be granted, upon request, exemption if the quality and range of their portfolio submissions are of exceptional merit. All portfolio requirements (those of applicants requesting Art 200 exemption as well as admission to specific programmes) are listed under *Admission* in each of the departments.

To ensure early processing of applications to the Faculty of Fine Arts studio arts programmes, the deadline for portfolio submission is Friday, March 15, 1991 (4:00 p.m.). It is the responsibility of the applicants to submit their portfolios before the deadline.

Students in other faculties and Independent students wishing to register for a studio arts course, other than Art 200, must submit their portfolio requesting exemption from Art 200 unless they have completed the 10.6 profile in CEGEP. The deadline for submission of these portfolios is Wednesday, August 15, 1990 (4:00 p.m.).

81.20 Degree Requirements

Students preparing for the degree of Bachelor of Fine Arts require a minimum of 90 credits. Each credit represents, for the average student, a minimum of 45 hours of work spread across lectures, conferences, tutorials, studios, rehearsals or practice periods, tests, examinations, and personal work.

81.20.1 BFA DEGREE REQUIREMENTS

1. A candidate for the degree of Bachelor of Fine Arts must have qualified for admission to, and successfully completed a programme of concentration in the form of a Specialization (See §16.2.5), Major (See §16.2.6) or a Double Minor* programme in the Faculty of Fine Arts. A selection is made upon entry, prior to registration. The requirement of selecting a programme upon entry should not be thought of as being necessarily a final commitment. Students wishing to transfer out of one degree programme must satisfy the admission requirements of the programme they seek to enter. Programme changes are, however, subject to limitations where certain programmes are in great demand. Students should be aware that to effect certain transfers they may be required to complete more than the 90 credits normally required for the degree.
   **A Minor consists of an approved sequence of 24-30 credits. The term "Double Minor" refers to a combination of two minors selected from the Faculty of Fine Arts; a planned programme of study in two specialized fields in Fine Arts with a lower degree of concentration in both than is afforded by a Major programme.*
2. A candidate for graduation must have successfully completed at least 18 credits selected from course offerings outside the Faculty of Fine Arts. (Courses in the Department of Communication Studies do not fulfill this requirement of outside the Faculty of Fine Arts.) Within every block of 30 credits taken towards the degree, a student is encouraged to choose no more than 24 credits from the Faculty of Fine Arts.
3. A candidate for graduation normally may apply no more than 54 credits in studio work towards the 90 credits required for the BFA degree.
4. A candidate for graduation must fulfill all University graduation requirements (See §16.2.11).
5. The credits obtained for any course may not be used to satisfy the requirements of more than one programme.

81.20.2 RESIDENCE REQUIREMENTS

Students are subject to the University residence requirement (see §16.1.5) which states that of the 90 credits required for the Bachelor of Fine Arts degree, a minimum of 45 credits must be taken at Concordia University. Combining both residence requirements implies that the full-time student must enroll for a minimum of two years of study at Concordia University.

To fulfill the residence requirements for a BFA degree with a concentration in:

1. Art Education, Ceramics, Design Art, Fibres, Painting and Drawing, Printmaking, Sculpture, or Studio Art: a minimum of 30 credits in Studio Art and 6 credits in Art History must be completed at Concordia.
2. Art History, Art History and Studio Art, Cinema, Film Animation, Film Production, Film Studies, or Photography: at least half of the concentration requirements must be completed at Concordia.
3. Drama in Education, Theatre, Theatre Performance, or Design for the Theatre: Conception & Realization: a minimum of 30 credits from the Department of Theatre must be completed at Concordia.
4. Integrative Music Studies, Jazz Studies, Music Performance Studies, Music Theory/Composition, or Selected Music Studies: a minimum of 30 credits required from the Department of Music must be completed at Concordia.
5. Minor programmes: at least half of the required credits must be completed at Concordia.

81.20.3 COURSE LOAD

The normal course load for students enrolled in the Faculty of Fine Arts is 30 credits per year for all full-time students, and a maximum of 18 credits per year for part-time students.

i) Full-time students may not register for more than 18 credits of their maximum 30 credits in any studio area in any given academic year. Part-time students may not register for more than 12 credits.

ii) Students may register for a maximum of 6 credits in which films are produced as a course requirement during any given academic year. *See §81.70 for list of courses.* Also, students are limited, during their degree programme, to 18 credits in Film Production or Film Animation courses in which films are produced as a course requirement (§81.70). With special permission, Cinema Majors in Option B, Film Animation are permitted to complete a total of 24 credits in these courses, of which 12 credits may be taken in any one year.

iii) Students may register for a maximum of 6 credits in Theatre Production in any given academic year, up to a maximum of 18 credits in all.

iv) Students may register for a maximum of 6 credits in Music Private Study in any given academic year, up to a maximum of 18 credits in their degree programme.

81.20.4 ACADEMIC PERFORMANCE REQUIREMENTS

For purposes of these regulations, "failure" includes the grades F, FNS, R, and NR.

Failed students are neither eligible to write supplemental examinations nor entitled to late completion of courses.

Definitions of Failed Standing

1. *Failed — May Not Re-Register Without Special Permission*

a) Any student who fails courses equivalent to more than the number of credits prescribed below before obtaining the number on record specified, will be Failed. In order to re-register such a student must obtain special permission from the Faculty Dean.

FAILED CREDITS More Than	BEFORE OBTAINING ON RECORD
12	30
24	60
36	90

b) A Failed student who is given permission to re-register is placed on Academic Probation.

c) A student placed on Academic Probation must pass the next thirty credits on the first attempt and satisfy any other conditions specified for readmission. A student failing to meet these requirements may not apply for readmission.

2. *Failed — May Not Re-Register*

Any student who fails courses equivalent to more than the number prescribed below will be Failed and may not apply for readmission.

FAILED CREDITS More Than	APPLICABLE PROGRAMMES
30	90-Credit and Certificate Programmes
36	Mature Entry Programme
42	Extended Credit Programme

Any Probationary Student who fails to fulfill the terms of the probation will also be Failed and may not apply for readmission.

81.30 Faculty of Fine Arts Programmes and Courses

Programme Coordinator
BARBARA MACKAY

24 Minor in Women and the Fine Arts

6 Faculty of Fine Arts 320[6]
6 WSDB 290[3], 291[3]
12 Electives in the Faculty of Fine Arts, chosen with the permission of a programme adviser

The following courses provide a format in which topics of Faculty-wide interest are considered:

FFAR 220 ***Sound in Fine Arts*** (3 credits)
A studio course dealing with the basics of sound and its application in the fine arts. Topics may include production aspects of sound in performance art, video art, dance and the theatre arts. The problems of copyright and ownership of the artistic materials are also considered.

FFAR 320 ***Women and the Fine Arts I*** (6 credits)
An investigation of the visual and performing arts as they pertain to issues of gender. Studio practices in relation to theoretical and critical concerns are investigated. *NOTE A/See §200.3*

FFAR 398 ***Special Topics in Fine Arts*** (3 credits)
A course which provides an opportunity for the study of specialized aspects of Fine Arts. *NOTE C/See §200.3*

FFAR 399 ***Special Topics in Fine Arts*** (6 credits)
A course which provides an opportunity for the study of specialized aspects of Fine Arts. *NOTE C/See §200.3*

FFAR 420 ***Women and the Fine Arts II*** (6 credits)
Prerequisite: Faculty of Fine Arts 320 or written permission of the co-ordinator.
A continuation of FFAR 320.

81.40 Inter-Related Arts

Programme Coordinator
NORMA WAGNER

The Faculty of Fine Arts offers a programme in Inter-Related Arts as an opportunity for students with an interest in organizing their studies in a multidisciplinary approach that involves more than two disciplines. Such students are required to select courses from the following areas with the approval of the Programme Coordinator and in consultation with academic advisers in the departments of the Faculty of Fine Arts.

60 BFA Major in Inter-Related Arts*

6 Inter-Related Arts 300[6]**
0-12 Inter-Related Arts electives
0-24 Department of Art History electives***
0-24 Department of Cinema: Film Studies electives, Film Animation 312[6], Film Production 231[6]
0-24 Contemporary Dance electives chosen in consultation with the Contemporary Dance Coordinator
0-24 Department of Music electives chosen in consultation with a programme adviser, Music
0-24 Department of Theatre electives chosen in consultation with a programme adviser, Theatre
0-24 Electives chosen from the Departments of Art Education and Art Therapy; Design Art; Painting and Drawing; Printmaking and Photography; Sculpture, Ceramics and Fibres***

**Credits must be taken in a minimum of 3 fields of concentration with a maximum of 24 credits in any field.*
***Students are required to take this course after completion of 30 credits and before the completion of 66 credits in their degree programme.*
****Art 460 may be substituted for 6 credits in Art History.*

81.40.1 ADMISSION TO THE MAJOR IN INTER-RELATED ARTS

There is a distinct admission procedure for admission to the Major in Inter-Related Arts in addition to the normal admission process of Concordia University.

All applicants are required to submit a statement of intent along with a copy of their academic record directly to the Programme Coordinator at the same time that they submit their completed application to the Admissions Office, i.e. prior to March 1. This letter of intent should include information on the applicants' academic and artistic backgrounds, their particular interests in Fine Arts and should clearly indicate the areas of Fine Arts which would form the Inter-Related Arts Major.

This letter of intent should include a statement of their goals with specific reasons for their programme choice. A programme core of relevant courses which constitute interdisciplinarity must be identified. It is recommended that students organize their programmes taking into account both theoretical and practical components.

Since multiple frames of reference are involved, a concern for artistic and aesthetic enquiry is expected. Applicants are advised that their overall programme of study should be prepared when entering the programme. The rationale and sequence of study must be approved by the Programme Coordinator.

An interview may be required as part of the admissions process. As well, in certain cases, departments have specific requirements and/or prerequisites for admission to courses.

INRA 300 ***Inter-Related Arts Seminar I*** (6 credits)
Prerequisite: Second-year standing* in the Major in Inter-Related Arts or written permission of the Coordinator of Inter-Related Arts.
A forum for the consideration of theory and practice addressing the nature of relationships between the fine arts.
**fewer than 66 credits remaining in degree programme.*

INRA 391 ***Independent Study I*** (3 credits)
Prerequisite: Third-year standing* and written permission of the Coordinator of Inter-Related Arts.
A course of independent study in which the student explores the relationship between two or more fields of concentration. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

INRA 392 ***Independent Study II*** (3 credits)
Prerequisite: Inter-Related Arts 391 and written permission of the Coordinator of Inter-Related Arts.
A student repeating Inter-Related Arts 391 registers for credit under Inter-Related Arts 392.

INRA 400 ***Inter-Related Arts Seminar II*** (6 credits)
Prerequisite: INRA 300. A student repeating Inter-Related Arts 300 registers under Inter-Related Arts 400.

81.50 Art Education and Art Therapy

Chair
ELIZABETH SACCA, *Associate Professor*

Professors
STANLEY HORNER
LEAH SHERMAN

Associate Professors
DAVID PARISER
ROBERT J. PARKER

Assistant Professors
JULIA BYERS
PAUL LANGDON
CATHY MULLEN

Lecturer
ANDREA FAIRCHILD

Students are responsible for fulfilling their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.
The superscript indicates credit value.

78* BFA Specialization in Art Education

18	Art Education 300^6, 400^6, 430^6
6	Art 200^6 or, if exempt, a studio arts elective
6	Art 261^{6**}, Art 460^6, Sculpture 465^6, or Art History elective
12	Drawing 200^6, Painting 200^6
6	Fibres 240^6, 260^6, Ceramics 230^6
6	Art History 370^3, 371^3, 373^3
12***	Studio arts electives chosen from the Departments of Design Art; Painting and Drawing; Printmaking and Photography; Sculpture, Ceramics and Fibres, in consultation with a programme adviser; Art Education and Art Therapy
12	Drama in Education or Department of Music electives

**With written permission of the Department of Art Education and Art Therapy, students may take an extra 6 credits from offerings of the Faculty of Fine Arts.*
***Students are advised to complete, in their first year, Art 261 in conjunction with either Art 200 and Drawing 200 or, if exempt from Art 200, with Drawing 200 and Painting 200.*
****6 credits in Art History may be substituted for 6 credits in studio arts.*
NOTE: Students applying to the Diploma in Art Education and for Québec Certification must, in addition, complete Education 210.

60* BFA Major in Art Education

12	Art Education 300^6, 400^6
6	Art 200^6 or, if exempt, a Studio arts elective
6	Art 261^{6**}, Art 460^6, Sculpture 465^6, or Art History electives from Group B, C or F
12	Drawing 200^6, Painting 200^6
6	Ceramics 230^6, Fibres 240^6, 260^6
6	Art History electives*
12**	Studio arts electives chosen from the Departments of Design Art; Painting and Drawing; Printmaking and Photography; Sculpture, Ceramics and Fibres, in consultation with a programme adviser; Art Education and Art Therapy

**Students are advised to complete, in their first year, Art 261 in conjunction with either Art 200 and Drawing 200 or, if exempt from Art 200, with Drawing 200 and Painting 200.*
***Film Animation 312 or 6 credits in Art History may be substituted for 6 credits in studio arts.*
NOTE: This programme is an alternative to the BFA Specialization in Art Education and does not lead directly to the Diploma in Art Education. Electives permit a wider choice in appropriate complementary areas in preparation for graduate study in areas such as art therapy, museum work, recreation, geriatrics and fine arts administration. Students wishing to qualify for the Diploma in Art Therapy at Concordia should refer to entrance requirements in the Graduate Calendar which include 6 credits in Art Therapy and 18-24 credits in Psychology.

THE CERTIFICATE IN ELEMENTARY ART EDUCATION

The Department of Art Education offers a Certificate in elementary art education for the professional development of teachers. The programme is designed in accordance with the guidelines of the Québec Ministry of Education and consists of studios, seminars, lectures, and a practicum. The programme offers classroom teachers opportunities to acquire the knowledge and skills needed to implement the elementary art programme and to enrich the curriculum by relating art to other subject areas. Courses are scheduled in the late afternoon or evenings, both on and off campus for the convenience of teachers.

Admission Requirements

Entry to the programme requires that the candidate be legally qualified to teach either at the elementary or high-school level. The Faculty of Fine Arts may allow up to 12 *pro tanto* credits to students who have completed appropriate courses that have been applied to a previous degree or certificate.

30	**Certificate in Elementary Art Education**
6	Art Education 200[6] or 201[3] and 202[3]
6	Art 200[6]
6	Art Education 330[6]
12	Electives from other offerings within the Faculty of Fine Arts

DIPLOMA IN ART EDUCATION

The Faculty of Fine Arts offers a one-year post-graduate programme leading to the Diploma in Art Education. This programme is integrated with the Bachelor of Fine Arts, Specialization in Art Education, to provide a continuous pattern of studies preparing art specialists for teaching in elementary and secondary schools.

A detailed description of the programme may be found in the Graduate Studies Calendar.

DIPLOMA IN ART THERAPY

The Faculty of Fine Arts offers a one-year post-graduate programme leading to the Diploma in Art Therapy.

This programme is designed to offer intermediate training for students intending to become qualified art therapists through further study and to provide basic skills in art therapy for members of the helping professions who wish to develop the use of the visual arts in their work.

A detailed description of the programme may be found in the Graduate Studies Calendar.

81.50.1 ADMISSION TO THE SPECIALIZATION AND MAJOR IN ART EDUCATION

Applicants to programmes in Art Education require the *CEGEP 10.6 profile* (see §81.10.1). Accepted applicants who have this profile are automatically exempt from Art 200, Studio Art I. Applicants who do not have the profile but have a background in studio arts are required to submit a *portfolio*; if accepted they are required to complete Art 200 during their first year. However, they may be granted exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works *larger than 20 x 24 inches (50 x 60 centimeters)* and three-dimensional works must be submitted in slide form.
6. Portfolios should be presented in a sturdy folder; works should be flat and unframed.
7. Out-of-town applicants may submit photographs and/or slides of their work. Return shipment of out-of-town portfolios is by prior arrangement only.

Portfolios are submitted to the Portfolio Evaluation Committee, Visual Arts Building, Room 237, prior to the deadline of Friday, March 15, 1991.

Art Education:

ARTE 200 ***Studio Orientation to Art Education*** (6 credits)
An introductory studio/seminar course in which students work with basic art forms such as drawing, painting, printmaking, sculpture, and video arts. Intrinsic to the course content is a consideration of the underlying dynamics of the learning/teaching process as it evolves, and as it raises implications for teaching others. *NOTE A/See §200.3*
NOTE: Students who receive credits for this course may not take Art Education 201 for credit.

ARTE 201 ***Art in Early Childhood I*** (3 credits)
Prerequisite: Enrolment in the Specialization in Early Childhood, Major in Child Studies, or written permission of the Department of Art Education and Art Therapy.
An introductory study of the art-making process in early childhood. This course is a studio workshop which investigates potential media and teaching approaches appropriate for the young child.
NOTE: Students who receive credit for this course may not take Art Education 200 for credit.

ARTE 202 ***Art in Early Childhood II*** (3 credits)
Prerequisite: Art Education 201.
A continuation of Art Education 201.

ARTE 203 ***Arts in Recreation*** (3 credits)
A workshop/seminar course in which students are introduced to various art forms currently used in recreation centres. Intrinsic to the course content is a consideration of the role of the arts in recreation and leisure populations.

ARTE 300* ***An Introduction to Art Education*** (6 credits)
Prerequisite: Eighteen credits in studio arts and second-year standing** or written permission of the Department of Art Education and Art Therapy.
A workshop/seminar course in which materials and art concepts are investigated and related to the teaching of art. Readings in the literature of Art Education are included.
**With permission of one of the studio arts Chairs, this course may satisfy a studio arts elective requirement in the student's degree programme, Major in Studio Art.*
***fewer than 66 credits remaining in degree programme.*

ARTE 301 ***Methodologies and Resources for the Teaching of Art History*** (3 credits)
Prerequisite: Six credits in Art History.
This course deals with the methodologies, resources, and content for teaching art history in elementary and secondary schools. The course consists of lectures, museum seminars, and field trips.

ARTE 310 ***Art Education in the Museum*** (6 credits)
Prerequisite: Six credits in Art History.
An examination of the role of art education in the museum and to the function of the museum in society. Fundamental problems in museum studies are considered in relation to the collection, preservation, exhibition and interpretation of art objects. The museum as an educational institution is studied in lectures, seminars, readings and field work. Topics include the educator's responsibilities in the planning and installing of exhibits, organizing docent and lecture programmes, and the preparing of audio-visual materials for the public.

ARTE 330 ***Supervised Practicum in Elementary Art Education*** (6 credits)
Prerequisite: Art Education 200, Art 200, and enrolment in the Certificate Programme in Art Education for Teachers.
The course includes seminars which examine the role of art in the educational system, and the theoretical framework for the planning and implementation of art activities. Students design curriculum-units in art for the elementary level and teach these under supervision in a school setting. Teaching performance is evaluated.

ARTE 398 ***Special Topics in Art Education*** (3 credits)
Prerequisite: Written permission of the Department of Art Education and Art Therapy.
A course which provides an opportunity for the study of specialized aspects of art education. Topics chosen for consideration vary from year to year. *NOTE C/See §200.3*

ARTE 400 ***Seminar and Practicum in Art Education*** (6 credits)
Prerequisite: Art Education 300, enrolment in the Specialization or Major in Art Education or written permission of the Department of Art Education and Art Therapy.
A seminar/practicum course in which students interrelate theory and the teaching of art to develop professional skills. Readings and supervised practicum involve the planning and implementation of a curriculum and individual sessions within the framework of an articulated philosophy of art education. *NOTE A/See §200.3*

ARTE 430* ***Multi-Media*** (6 credits)
Prerequisite: Eighteen credits in studio arts and second-year standing** or written permission of the Department of Art Education and Art Therapy.
An introduction to photography, super-8 film-making, video, and sound. The course deals with the practical and theoretical aspects of these media and explores their potential for the artist and art educator. *NOTE A/See §200.3*
**With permission of one of the studio arts Department Chairs, this course may satisfy a studio arts elective requirement in the student's degree programme, Major in Studio Art.*
***fewer than 66 credits remaining in degree programme.*

ARTE 498 ***Special Topics in Art Education*** (3 credits)
Prerequisite: Written permission of the Department of Art Education and Art Therapy.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of art education. The topics chosen for consideration vary from year to year according to the instructor's field of specialization. *NOTE C/See §200.3*

Art Therapy:

This course in Art Therapy is intended as part preparation for graduate study in this area.

ATRP 300 ***An Introduction to Art Therapy*** (6 credits)
Prerequisite: Second-year standing* and written permission of the Department of Art Education and Art Therapy, Psychology 200 (or equivalent); Major in Art Education or twelve credits in studio arts.
Through lectures, seminars and workshops students examine basic concepts of art therapy and some of their practical application.
**fewer than 66 credits remaining in degree programme.*

81.60 Art History

Chair
DONALD ANDRUS, *Associate Professor*

Professors
EDWY COOKE
WARREN SANDERSON

Associate Professors
JEAN BELISLE
HARDY GEORGE
REESA GREENBERG
ELLEN JAMES
SANDRA PAIKOWSKY

Assistant Professors
BRIAN FOSS
CATHERINE MACKENZIE

Students are responsible for satisfying their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.
The superscript indicates credit value.

66 BFA Major in Art History

6	Chosen from Group A
12	Chosen from Group B
6	Chosen from Group C
12	Chosen from Group D
30*	Chosen from at least two of the Groups in Art History, in consultation with an assigned adviser

**Students may substitute credits from the Faculty of Fine Arts for up to twelve credits in Art History.*

60 BFA Major in Art History and Studio Art

6	Art History 280^3, 281^3
6	Art History 267^3, 268^3 or 434^6 or studio arts elective
6	Art 200^6 or, if exempt, a studio arts elective
24	Art History electives*
18	Studio arts electives chosen from studio courses offered by departments of: Design Art; Painting and Drawing; Printmaking and Photography; Sculpture, Ceramics and Fibres

**Art 460 may be substituted for 6 credits in Art History.*

30 Minor in Archaeology

12	Art History 290^3, 291^3, 292^3, 396^3
6	Art History electives chosen from other groups in consultation with the Archaeology supervisor
12	Electives chosen with the permission of the Archaeology Coordinator from Art History or appropriate courses in Anthropology, Chemistry, Classics, Geography, History, or Physics

30 Minor in Art History

3	Art History elective from Group D
27	Art History elective chosen from at least 3 of the Groups in Art History, in consultation with an assigned adviser

30 Minor in Art History and Studio Art

6	Art History 280^3, 281^3
6	Art 200^6 or, if exempt a studio arts elective
6-12	Art History electives
6-12	Studio arts electives

81.60.1 ADMISSION TO THE MAJOR IN ART HISTORY AND STUDIO ART

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major in Art History and Studio Art.

All applicants must submit a portfolio as part of the admission process. Accepted applicants who have the *CEGEP 10.6 profile* (see 81.10.1) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may request exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works *larger than 20 x 24 inches (50 x 60 centimeters)* and three-dimensional works must be submitted in slide form.
6. Portfolios should be presented in a sturdy folder; works should be flat and unframed.
7. Out-of-town applicants may submit photographs and/or slides of their work. Return shipment of out-of-town portfolios is by prior arrangement only.

Applicants submit this portfolio to the Portfolio Committee, Visual Arts Building, Room 237, prior to the deadline of Friday, March 15, 1991. For more detailed information regarding admission to the Major in Art History and Studio Art, applicants should contact one of the studio arts departments.

Groups:

A — Media Based Studies

ARTH 260 History of Design (6 credits)
ARTH 261 Studies in Architecture (3 credits)
ARTH 262 Studies in Drawing (3 credits)
ARTH 263 Studies in Print (3 credits)
ARTH 264 History of Ceramics (3 credits)
ARTH 265 History of Sculpture (3 credits)
ARTH 266 History of Textile Art (3 credits)
ARTH 267 Materials and Methods in Art I (3 credits)
ARTH 268 Materials and Methods in Art II (3 credits)
ARTH 349 Aspects of the History of the Print (3 credits)
ARTH 350 Aspects of the History of Ceramics (3 credits)
ARTH 351 Aspects of the History of Sculpture (3 credits)
ARTH 352 Aspects of the History of Textile Art (3 credits)
ARTH 353 Technology and Contemporary Art (3 credits)
ARTH 354 Gesamtkunstwerk (3 credits)
ARTH 434 Materials and Methods of the Artist (6 credits)

B — Period Studies

ARTH 270 Icons of Architectural History (3 credits)
ARTH 360 Aspects of Ancient Greek Art and Architecture (3 credits)
ARTH 361 Aspects of Ancient Roman Art and Architecture (3 credits)
ARTH 362 Aspects of Early Christian and Byzantine Art and Architecture (3 credits)
ARTH 363 Aspects of Medieval Art and Architecture (3 credits)
ARTH 364 Aspects of Fifteenth- and Sixteenth-Century European Art and Architecture (3 credits)
ARTH 365 Aspects of Seventeenth- and Eighteenth-Century Western Art and Architecture (3 credits)
ARTH 366 Aspects of Nineteenth-Century Western Art and Architecture (3 credits)
ARTH 367 Aspects of Twentieth-Century Art and Architecture (3 credits)
ARTH 368 Aspects of Contemporary Art and Architecture (3 credits)
ARTH 369 Aspects of Non-Western Art and Architecture (3 credits)
ARTH 498 Special Topics in the History of Art and Architecture (3 credits)

C — Art in Canada

ARTH 370 Aspects of Canadian Art (3 credits)
ARTH 371 Aspects of Canadian Architecture (3 credits)
ARTH 372 Issues in Contemporary Canadian Architecture (3 credits)
ARTH 373 Issues in Contemporary Canadian Art (3 credits)
ARTH 374 Architecture and Urbanism in Montréal (3 credits)
ARTH 375 Issues in the Montréal Art Milieu (3 credits)

D — Methodology

ARTH 280 Visual Literacy (3 credits)
ARTH 281 Methods of Art History (3 credits)
ARTH 282 Narration and Art (3 credits)
ARTH 283 The Life and Work of ... (3 credits)
ARTH 298 Special Topics in Genre Studies (3 credits)
ARTH 380 Historiography and Art History (3 credits)
ARTH 381 Feminism and Art History (3 credits)
ARTH 382 Western Perspectives on Non-Western Art (3 credits)
ARTH 400 Advanced Seminar in Art Historical Method (3 credits)

E — Theory and Criticism

ARTH 383 Art and Philosophy (3 credits)
ARTH 384 Theories of Representation (3 credits)
ARTH 385 Colour: Theory and Application in the Visual Arts (3 credits)
ARTH 386 The Art Object and the Viewer (3 credits)
ARTH 387 Seminar in Art and Art Criticism (3 credits)

F — Art and Society

ARTH 390 Art Institutions (3 credits)
ARTH 391 Art and its Changing Contexts (3 credits)
ARTH 392 Gender Issues in Art and Art History (3 credits)
ARTH 393 Art and Replication (3 credits)
ARTH 398 Special Topics in Art and Society (3 credits)

G — **Tutored Studies**

ARTH 394 Intensive Study in Art History I (1.5 credits)
ARTH 395 Intensive Study in Art History II (1.5 credits)
ARTH 397 Intensive Study in Archaeology (3 credits)
ARTH 401 Independent Studies in Art History (3 credits)
ARTH 402 Independent Studies in Archaeology (3 credits)

H — **Archaeology**

ARTH 290 Art History and Archaeology (3 credits)
ARTH 291 The History and Practice of Archaeology (3 credits)
ARTH 292 Rethinking Archaeology (3 credits)
ARTH 396 Special Studies in Archaeology (3 credits)

ARTH 260 ***The History of Design: Theory and Practice*** (6 credits)
Prerequisite: Enrolment in the Major in Design Art, or an Art History programme, or written permission of the Department of Art History.
A consideration of design theory and practice, with emphasis on the inter-relationship of stylistic, socio-cultural and technical aspects. Examples are drawn from a broad spectrum of epochs and geographical areas, but particular attention is given to historical approaches that have importance for contemporary design. *NOTE A/See §200.3*

ARTH 261 ***Studies in Architecture*** (3 credits)
The role and implications of selected materials and technology in architecture.

ARTH 262 ***Studies in Drawing*** (3 credits)
Drawing as an art form and its relation to other arts. *NOTE A/See §200.3*

ARTH 263 ***Studies in the Print*** (3 credits)
A selective examination of the development and uses of the print as an art form or a medium in Western and Non-Western cultures. *NOTE A/See §200.3*

ARTH 264 ***History of Ceramics*** (3 credits)
A selective examination of the development and uses of ceramics as an art form or a medium in Western and Non-Western traditions. *NOTE A/See §200.3*

ARTH 265 ***History of Sculpture*** (3 credits)
A selective examination of the development and uses of sculpture as an art form or a medium in Western traditions.

ARTH 266 ***History of Textile Art*** (3 credits)
A selective examination of the development of textile art in the Western and non-Western traditions. *NOTE A/See §200.3*

ARTH 267 ***Materials and Methods in Art I*** (3 credits)
Theoretical and practical instruction which familiarizes a student with the history of selected materials, processes and technology used in two-dimensional art forms. *NOTE A/See §200.3*

ARTH 268 ***Materials and Methods in Art II*** (3 credits)
Theoretical and practical instruction which familiarizes a student with the history of selected materials, processes and technology used in non-two-dimensional art forms. *NOTE A/See §200.3*

ARTH 270 ***Icons of Architectural History*** (3 credits)
A study of key buildings of civilization in relation to the specific vocabulary of architecture, its techniques and conditions of construction. Consideration is given as to how and why these buildings have become icons in particular societies.

ARTH 280 ***Visual Literacy*** (3 credits)
An analysis of the form of a work of art in terms of its individual components and their relationships, which incorporates a critical consideration of concepts and vocabularies that have been developed for such an analysis.

ARTH 281 ***Methods of Art History*** (3 credits)
An introduction to various methods used in art history to describe and/or interpret works of art.

ARTH 282 ***Narration and Art*** (3 credits)
A critical examination of given aspects of the relationship between an image and its external references.

ARTH 283 ***The Life and Work of ...*** (3 credits)
A critical examination of the relationship of accounts of an artist's life to an interpretation of her or his work.

ARTH 290 ***Art History and Archaeology*** (3 credits)
An examination of the interrelationship between art history and archaeology as manifested in systems of: classification, interpretation, periodization, stratification as well as the valorization of series and fragments. *NOTE A/See §200.3*

ARTH 291 ***The History and Practice of Archaeology*** (3 credits)
An examination of the history and methods of archaeology. Special consideration is given to the traditional biases of archaeology and their repercussions on the development of the discipline in particular the practice of archaeology in North America. A practicum is included.

ARTH 292 ***Rethinking Archaeology*** (3 credits)
An examination of recent interpretations of archaeological "findings".

ARTH 298 ***Special Topics in Genre Studies*** (3 credits)
Topics pertaining to categories of subject matter such as landscape, portraiture and still life. *NOTE C/See §200.3*

ARTH 349 ***Aspects of the History of the Print*** (3 credits)
An examination of selected subjects in the history of the print.

ARTH 350 ***Aspects of the History of Ceramics*** (3 credits)
An examination of selected subjects in the history of ceramics. *NOTE A/See §200.3*

ARTH 351 ***Aspects of the History of Sculpture*** (3 credits)
An examination of selected subjects in the history of sculpture.

ARTH 352 ***Aspects of the History of Textile Art*** (3 credits)
An examination of selected subjects in the history of textile art. *NOTE A/See §200.3*

ARTH 353 ***Technology and Contemporary Art*** (3 credits)
A selective examination of the dynamics of the relationship between technology and contemporary art.

ARTH 354 ***Gesamtkunstwerk*** (3 credits)
Prerequisite: Six credits in Art History or written permission of the Department of Art History.
A selective examination of art which utilizes a number of media. The relationship to work in a single medium and historical concepts of multi-media are examined.

ARTH 360 ***Aspects of Ancient Greek Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of Ancient Greek Art. *NOTE A/See §200.3*

ARTH 361 ***Aspects of Ancient Roman Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of Ancient Roman Art. *NOTE A/See §200.3*

ARTH 362 ***Aspects of Early Christian and Byzantine Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of Early Christian and Byzantine Art. *NOTE A/See §200.3*

ARTH 363 ***Aspects of Medieval Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of Medieval Art. *NOTE A/See §200.3*

ARTH 364 ***Aspects of Fifteenth- and Sixteenth-Century European Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of fifteenth- and sixteenth-century European art. *NOTE A/See §200.3*

ARTH 365 ***Aspects of Seventeenth- and Eighteenth-Century Western Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of seventeenth- and eighteenth-century Western art. *NOTE A/See §200.3*

ARTH 366 ***Aspects of Nineteenth-Century Western Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of nineteenth-century Western art. *NOTE A/See §200.3*

ARTH 367 ***Aspects of Twentieth-Century Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of twentieth-century art. *NOTE A/See §200.3*

ARTH 368 ***Aspects of Contemporary Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of contemporary art. *NOTE A/See §200.3*

ARTH 369 ***Aspects of Non-Western Art and Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of given non-European cultures. *NOTE A/See §200.3*

ARTH 370 ***Aspects of Canadian Art*** (3 credits)
Selected subjects examined in relation to predominant characteristics of art in Canada. *NOTE A/See §200.3*

ARTH 371 ***Aspects of Canadian Architecture*** (3 credits)
Selected subjects examined in relation to predominant characteristics of architecture in Canada. *NOTE A/See §200.3*

ARTH 372 ***Issues in Contemporary Canadian Architecture*** (3 credits)
Prerequisite: Six credits in Art History or written permission of the Department of Art History.
A consideration of specific questions relevant to the current status and practice of architecture in Canada.

ARTH 373 ***Issues in Contemporary Canadian Art*** (3 credits)
Prerequisite: Six credits in Art History or written permission of the Department of Art History.
A consideration of specific questions pertinent to contemporary art in Canada. *NOTE A/See §200.3*

ARTH 374 ***Architecture and Urbanism in Montréal*** (3 credits)
The relationship of architecture to issues of urbanism, analyzed through examples from Montréal's past and/or present.

ARTH 375 ***Issues in the Montréal Art Milieu*** (3 credits)
Prerequisite: Six credits in Art History or written permission of the Department of Art History.
An analysis of specific artistic phenomena or events in Montréal.

ARTH 380 ***Historiography and Art History*** (3 credits)
The history of art history as a discipline and the concepts of history it uses.

ARTH 381 ***Feminism and Art History*** (3 credits)
A consideration of the effects of feminism on art history since the late 1960's.

ARTH 382 ***Western Perspectives on Non-Western Art*** (3 credits)
An examination of how Western concepts are used to interpret art produced in non-Western cultures.

ARTH 383 ***Art and Philosophy*** (3 credits)
A consideration of the impact of Western philosophy on art theory and practice.

ARTH 384 ***Theories of Representation*** (3 credits)
An examination of the different concepts of representation involved in the process of creating an art object, taking into account the relationships among image, referent, artist and audience.

ARTH 385 ***Colour: Theory and Application in the Visual Arts*** (3 credits)
An examination of various theories of colour as posited by artists, philosophers, psychologists and scientists. The relationship of such theories to the visual arts constitute an essential concern of the course.

ARTH 386 ***The Art Object and the Viewer*** (3 credits)
A consideration of such questions as how a work of art addresses the viewer, what types of viewer (generic or individual) it postulates, and what theories of perception (spatial, kinesthetic or psychological) are involved in explaining the process of experiencing an art object.

ARTH 387 ***Seminar in Art and Criticism*** (3 credits)
Prerequisite: Twelve credits in Art History or written permission of the Department of Art History.
An examination of selected aspects of the relationship between art and criticism. *NOTE A/See §200.3*

ARTH 390 ***Art Institutions*** (3 credits)
A study of selected institutions of art from a historical perspective. Consideration is given to the inter-relationship of the institution and the milieu in which art is defined, made, exhibited or purchased.

ARTH 391 ***Art and its Changing Contexts*** (3 credits)
An investigation of the factors which define the initial context of a work of art and of those which modify or eclipse an original context.

ARTH 392 ***Gender Issues in Art and Art History*** (3 credits)
An examination of gender as a factor in making and interpreting art.

ARTH 393 ***Art and Replication*** (3 credits)
An examination of various methods of replicating art (drawing, painting, printing, casting, photographing) and their relation to the original. Special consideration is given to the effects of the "copy" on art education, aesthetics, technique, patronage and the market.

ARTH 394 ***Intensive Study in Art History I*** (1.5 credits)
Prerequisite: Written permission of the Department of Art History.
An intensive course of study designed to take advantage of the presence of a visiting scholar or the occurrence of a special event.

ARTH 395 ***Intensive Study in Art History II*** (1.5 credits)
Prerequisite: Written permission of the Department of Art History.
An intensive course of study designed to take advantage of the presence of a visiting scholar or the occurrence of a special event. *NOTE C/See §200.3*

ARTH 396 ***Special Studies in Archaeology*** (3 credits)
Prerequisite: Twelve credits in Art History or written permission of the Department of Art History.
A course designed to permit a detailed examination of some aspects of archaeology. *NOTE A/See §200.3*

ARTH 397 ***Intensive Study in Archaeology*** (3 credits)
Prerequisite: Third-year standing* in the Major in Art History or the Minor in Archaeology or written permission of the Department of Art History.
Students are required to participate in a dig and to submit a paper. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

ARTH 398 ***Special Topics in Art and Society*** (3 credits)
Prerequisite: Twelve credits in Art History or written permission of the Department of Art History.
A course designed to permit a detailed examination of some aspects of art in society. *NOTE C/See §200.3*

ARTH 400 ***Advanced Seminar in Art Historical Method*** (3 credits)
Prerequisite: Third-year* standing in the Major in Art History.
A seminar designed to permit an in-depth examination of some aspects of methodology relevant to art history. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

ARTH 401 ***Independent Studies in Art History*** (3 credits)
Prerequisite: Third-year* standing in the Major in Art History and written permission of the Department of Art History.
Students are required to prepare a research paper under the supervision of a faculty member. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

ARTH 402 ***Independent Studies in Archaeology*** (3 credits)
Prerequisite: Third-year standing* in the Major in Art History or the Minor in Archaeology, and written permission of the Department of Art History.
Students are required to prepare a research paper under the supervision of a faculty member. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

ARTH 434 ***Materials and Methods of the Artist*** (6 credits)
Prerequisite: Enrolment in the Major/Minor in Art History or the Major in Art History and Studio Art.
Through a series of special projects in the media of drawing and painting, this course familiarizes the student with some of the historical materials, techniques and other aspects of the artist's concern.
NOTE: Students who have received credit for ARTH 267 or ARTH 234 or ART 234 or ART 420 may not take this course for credit.

ARTH 498 ***Special Topics in the History of Art and Architecture*** (3 credits)
Prerequisite: Eighteen credits in Art History or written permission of the Department of Art History.
A course for advanced students which provides for the study of more specialized areas of art. *NOTE A/See §200.3*

81.70 Cinema

Chair
JOHN LOCKE, *Associate Professor*

Associate Professors
MARIO FALSETTO
ANDRÉ HERMAN
MARJORIE MORTON
THOMAS WAUGH
CAROLE ZUCKER

Assistant Professors
STEFAN ANASTASIU
CHRISTOPHER HINTON
MARIELLE NITOSLAWSKA
PETER RIST
CATHERINE RUSSELL
NICHOLAS ZAVAGLIA

Students are responsible for fulfilling their particular degree requirements; hence, the following sequences must be read in conjunction with §81.20.
The superscript indicates credit value.

66 BFA Specialization in Film Production
NOTE: It is strongly recommended that students in the Specialization in Film Production have, or acquire, a knowledge of French.

24* Film Studies 211^6, 212^6, Film Production 231^6, 339^3, 450^3
9 Film Production 335^3, 341^3, 343^3, 398^3, 438^3, 439^3, 440^3, 441^3, 498^3
3 Film Studies 311^3, 312^3, 318^3, 324^3, 328^3, 329^3
6 Film Studies elective credits, excluding Film Studies 200**
6 Department of Cinema electives, excluding Film Studies 200,** or credits outside of Cinema selected in consultation with the Head of Film Production
18 Film Production 332^6, 337^6, and 432^6 or 433^6
or
Film Production 331^6, 336^6, 431^6

66 BFA Specialization in Film Studies
NOTE: It is strongly recommended that students in the Specialization in Film Studies have, or acquire, a knowledge of French.

36* Film Studies 211^6, 212^6, 311^3, 312^3, 321^6, 322^6, Film Production 231^6
6 Film Studies 314^3, 315^3, 418^3, 419^3***
12 Film Studies electives, (excluding Film Studies 200**), Film Production 334^3, 341^3, 441^3
6 Film Studies 414^3, 415^3, 416^3, 417^3, 418^3, 419^3, 422^3, 423^3, 424^3, or equivalent Film Studies seminar credits chosen in consultation with an adviser****
6 400-level Film Studies electives****

48 BFA Major in Cinema

Option A — Film Production

18* Film Studies 211^6, 212^6, Film Production 231^6
12 Department of Cinema electives**
18 Film Production 331^6, 336^6, Film Studies 318^3, Film Studies elective
or
Film Production 332^6, 337^6, Film Studies elective(s) (excluding Film Studies 200)

Option B — Film Animation

12* Film Studies 211^6, 212^6, or 6 credits in Art History
27 Film Animation 312^6, 313^6, 314^3, 316^3, 414^6, Film Studies 323^3
6 Cinema or studio arts electives
3 Department of Cinema electives

NOTE: In specific cases, and with the written permission of the Film Animation Coordinator, Film Production 231^6 may be substituted for Film Animation 414^6.

Option C — Film Studies

24* Film Studies 211^6, 212^6, 321^6, 322^6
18 Film Studies electives,** excluding Film Studies 200
6 Department of Cinema electives

30 Minor in Cinema

12 Film Studies 211^6, 212^6
18 Film Studies electives** (With the written permission of the Department of Cinema, introductory-level Film Animation or Film Production courses, selected in consultation with the Department, may be substituted.)

This is a very limited enrolment programme for students who want to have some access to Film Production and Film Animation courses.
This Minor cannot be combined with the Minor in Film Animation or the Minor in Film Studies to form a Double Minor programme.

30 Minor in Film Animation

12 Film Animation 312^6, 313^6
3 Film Studies 323^3
6 Film Studies 212^6
9 Cinema or studio arts electives chosen in consultation with the Coordinator of Film Animation

This Minor cannot be combined with the Minor in Cinema or the Minor in Film Studies to form a Double Minor programme.

24 Minor in Film Studies
12 Film Studies 200[6], 211[6], 212[6]
12 Film Studies electives**

This minor cannot be combined with a second Faculty of Fine Arts Minor to form a BFA Double Minor programme. It is intended for students outside the Faculty of Fine Arts. Students in Communication Studies Department degree programmes must have written permission of their department to enter this programme.

NOTES:
**Film Studies 211 and 212 should be taken as part of the first 30 credits.*
***In both the Specialization in Film Studies and the Major in Cinema, Français 373, and/or up to 12 credits in Communication Studies (listed in §81.70.3) may be substituted for Film Studies elective credits and must be considered as Film Studies or Cinema electives for degree purposes. In both the Minor in Cinema and the Minor in Film Studies, Français 373 or up to 6 credits in Communication Studies (listed in §81.70.3) may be substituted for Film Studies credits for degree purposes.*

****Communication Studies 316 may be substituted for 3 credits in Film Studies and must be considered as Film Studies credits for degree purposes.*

*****Students are required to complete a minimum of 12 credits from 400-level Film Studies offerings.*

81.70.1 ADMISSION TO CINEMA PROGRAMMES

The Department of Cinema has a distinct admission procedure in addition to the normal admission process of Concordia University.

All applicants are required to attend an interview and submit a portfolio as part of the admission process. Applicants must contact the Department of Cinema between March 1-15 to arrange their appointments and for detailed information regarding portfolio/interview requirements.

Successful applicants to the Specialization in Film Production and the Major in Cinema, Option A, Film Production are accepted into the Major in Cinema with no option specified. After completion of their first 30 credits in the programme, these students may apply for transfer into a concentration in Film Production.

Film Studies:

FMST 200 ***Introduction to Film Studies*** (6 credits)
A survey acquainting the student with the art of the film. The technical and critical terminology of film studies is discussed. Popular literature on film, such as reviews, is analyzed and the more specialized film literature is introduced. Directors whose films are usually viewed include Bergman, Eisenstein, Fellini, Ford, Hitchcock, Kurosawa, Lubitsch, Keaton, and Welles. Weekly screenings. *NOTE A/See §200.3*

FMST 211* ***History of Film*** (6 credits)
The evolution of the forms and themes of world cinema from its origin to 1959, in relation to its cultural, social and political contexts. Special emphasis is placed on film historical methodology, focusing on approaches based on genre, auteur, national cinemas, social history, particular cinematic modes or other frameworks. Weekly screenings. *NOTE A/See §200.3*
**Students in Cinema programmes who require Film Studies 211 should complete the course as part of their first 30 credits.*

FMST 211* ***L'histoire du cinéma*** (6 crédits)
Ce cours couvre l'évolution des formes et des thématiques cinématographiques depuis leur début jusqu'à 1959 et les place dans leur contexte culturel, social et politique. L'accent est mis principalement sur la méthodologie de l'histoire du cinéma tout en privilégiant plusieurs angles d'approche: genre, cinéma d'auteur, cinéma national, histoire sociale, forme cinématographique particulière, ou d'autres grilles. Visionnements hebdomadaires. *NOTE A/Voir §200.3*
**Si ce cours figure au programme d'une personne inscrite en cinéma, il devrait faire partie des 30 premiers crédits.*

FMST 212* ***Film Aesthetics*** (6 credits)
A study of the aesthetics of film. Topics include film criticism, theories about the fundamental elements of film, and comparisons between films which do not depend on their date of production. Problems of film description, interpretation, and evaluation are discussed. Weekly screenings. *NOTE A/See §200.3*
**Students in Cinema programmes who require Film Studies 212 should complete the course as part of their first 30 credits.*

FMST 311 ***Montage Aesthetic*** (3 credits)
Prerequisite: Film Studies 212.
An intensive study of montage as an element of film style. Beginning with the work of D.W. Griffith, developments in film editing are followed through French Avant-Garde and Russian films of the 1920's to contemporary film. Weekly screenings.

FMST 312 ***Moving Camera Aesthetic*** (3 credits)
Prerequisite: Film Studies 212.
An intensive study of camera movement as an element of film style. Consideration is given to relations between long takes, deep focus cinematography, and camera movement, as well as to the role of camera movement in creating the signification of film. Films by Murnau, Renoir, Welles, Ophuls, and Snow are included among those viewed and discussed. Weekly screenings.

FMST 313 ***Film Comedy I*** (3 credits)
Prerequisite: Second-year standing.*
An introduction to film comedy in the silent and sound eras. The visual and verbal sources of comedy are analyzed through the study of films ranging from Mack Sennett and Buster Keaton to Woody Allen and Jacques Tati. Weekly screenings.
**fewer than 66 credits remaining in degree programme.*

FMST 314 ***English-Canadian Film*** (3 credits)
A survey of English-Canadian film from the earliest surviving works to the present. Topics include fictional, documentary, animated, and experimental film. The role of the National Film Board is discussed. Weekly screenings. *NOTE A/See §200.3*

FMST 315 ***Le cinéma québécois*** (3 crédits)
Revue des films québécois, mettant principalement l'accent sur les oeuvres contemporaines. Les aspects culturels et politiques particuliers de ces films sont examinés. La structure de l'industrie cinématographique du Québec et le rôle de l'Office National du Film y sont traités particulièrement. Visionnements hebdomadaires. *NOTE A/Voir §200.3*

FMST 318 ***Experimental Film*** (3 credits)
Prerequisite: Second-year standing.*
An examination of experimental film emphasizing developments from the late forties to the present. The New American Cinema is considered in relation to other North American and European experimental cinemas, and examples of the historical antecedents of recent experimental films are viewed and discussed. Weekly screenings.
**fewer than 66 credits remaining in degree programme.*

FMST 321 ***Studies in Film Directors*** (6 credits)
Prerequisite: Film Studies 211 or second-year standing*.
A concentrated study of the work of several major directors, principally narrative, from different periods in film history. Each director's work is examined in detail with representative films from distinct periods. The films are considered in terms of thematic and stylistic consistency and variation as well as biographical, social, and political factors. Weekly screenings. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 322 ***Contemporary Film*** (6 credits)
Prerequisite: Film Studies 211 or second-year standing*.
A cross-cultural historical examination of selected aspects of world cinema since 1959, including trends in documentary and experimental film. The principle focus on European and American cinema is contextualized through reference to Canadian, Japanese and Third World film. A range of perspectives is introduced, including genre and auteur study, formal analysis and feminist analysis. Films are studied in their political and cultural contexts. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 323 ***History of Animated Film*** (3 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B Film Animation, Minor in Film Animation, or second-year standing*.
A survey of animated film from the first decade of the twentieth century to the present. Styles of animation ranging from abstract experimental film of the 1920's, to the Disney Studio, to computer animation are viewed and discussed. The contribution of the National Film Board of Canada and particularly that of Norman McLaren is considered. Weekly screenings. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 323 ***Histoire du cinéma d'animation*** (3 crédits)
Préalable: Inscription à la majeure, option B, Cinéma d'animation, la mineure en cinéma d'animation, ou niveau de scolarité de la deuxième année*.
Aperçu général du film d'animation depuis la première décennie du vingtième siècle, jusqu'à nos jours. Les styles d'animation, du film expérimental abstrait des années 20 au Studio Disney, et à l'animation par ordinateur, sont présentés et étudiés. Est traité aussi l'apport de l'Office National du Film, en particulier celui de Norman McLaren. Visionnements hebdomadaires. *NOTE A/Voir §200.3*
**moins de 66 crédits à obtenir dans un programme conduisant à un diplôme*

FMST 324 ***Film Script Analysis*** (3 credits)
Prerequisite: Second-year standing* and six credits in Film Studies.
A study of the film script both as a basis for the construction of a film and as an identifiable component of film with its own history and value. Examples from film history as well as the work of major scriptwriters are analyzed, in their written form and through film screenings. The stages of script development from story idea through shooting script are discussed.
**fewer than 66 credits remaining in degree programme.*

FMST 324 ***Analyse de scénarios*** (3 crédits)
Préalable: Niveau de scolarité de la deuxième année* et six crédits en études cinématographiques.
Étude de scénarios sur deux plans: d'une part canevas du film et d'autre part élément identifiable ayant une histoire et une valeur propre. Analyse d'exemples tirés de l'histoire du cinéma et de l'oeuvre des plus

grands scénaristes, à l'aide des textes eux-mêmes et de visionnements. Les diverses étapes de rédaction du scénario depuis l'idée de départ jusqu'au découpage sont étudiées.
**moins de 66 crédits à obtenir dans un programme conduisant à un diplôme*

FMST 325 ***Film Acting*** (3 credits)
Prerequisite: Second-year standing.*
A study of film acting centered on examining performances, and individual scenes from films. Among the issues studied are the creation of star personas, casting against type, the influence of the script in the performance, the use of improvisation, the gesture system in silent film acting, ensemble acting, stylization and exaggeration. Weekly screenings. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 327 ***Third World Film*** (3 credits)
Prerequisite: Second-year standing.*
A survey of Third-World films seen in relation to their cultural, political, and aesthetic environment. Films are selected from areas such as Latin America, the Caribbean, Africa, the Middle East, South and East Asia. Weekly screenings.
**fewer than 66 credits remaining in degree programme.*

FMST 327 ***Cinéma du Tiers-Monde*** (3 crédits)
Préalable: Niveau de scolarité de la deuxième année.*
Revue des films du Tiers-Monde dans leur cadre culturel, politique, et esthétique. Les films choisis viennent d'Amérique latine, des Antilles, d'Afrique, du Moyen-Orient, d'Asie du Sud et de l'Est. Visionnements hebdomadaires.
**moins de 66 crédits à obtenir dans un programme conduisant à un diplôme*

FMST 328 ***Nonfiction Film Since 1956*** (3 credits)
Prerequisite: Second-year standing*.
A cross-cultural survey of contemporary developments in the documentary film. The course begins with the precursors of *cinéma-direct* in North America and Europe during the fifties, and extends through the most recent applications of *cinéma-direct* in the emerging cinemas of the Third World. Emphasis is placed on both the artistic achievement and the theoretical, cultural and political context of the nonfiction film during this period of technological and aesthetic transition. Weekly screenings.
**fewer than 66 credits remaining in degree programme.*

FMST 328 ***Le documentaire depuis 1956*** (3 crédits)
Préalable: Niveau de scolarité de la deuxième année*.
Revue pan-culturelle des progrès actuels du documentaire. Le cours va de l'étude des précurseurs du cinéma direct en Amérique du Nord et en Europe durant les années 50 aux plus récentes applications chez les cinémas naissants des pays du Tiers-Monde. L'accent est mis sur l'aspect artistique et le contexte théorique, culturel et politique du documentaire durant cette période de transition technologique et esthétique. Visionnements hebdomadaires.
**moins de 66 crédits à obtenir dans un programme conduisant à un diplôme*

FMST 329 ***Women and Film*** (3 credits)
Prerequisite: Film Studies 211, or second-year standing*.
An examination of films made by women, film criticism written by women, and the portrayal of women in films. These topics are considered within the context of film history and with an emphasis on their relation to ideas in contemporary feminist theory. Weekly screenings. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 331 ***Non-Fiction and Experimental Filmmakers*** (3 credits)
Prerequisite: Film Studies 211 or second-year standing*.
An intensive study of a limited number of documentary and avant-garde filmmakers outside the mainstream of narrative fiction. The artists covered are chosen according to the interests of the instructor, with a view to suggesting a broad historical and aesthetic range of cinematic practice. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 335 ***Aspects of National Cinemas*** (3 credits)
Prerequisite: Second-year standing.*
An examination of films as reflections of national cultures. Films by a range of directors representing one or several national groupings such as Japan, Brazil, Eastern Europe, Great Britain, or contemporary West Germany are discussed in the context of their aesthetic, cultural, and political aspirations. Weekly screenings. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 337 ***Topics in American Cinema I*** (3 credits)
Prerequisite: Second-year standing.*
A lecture or seminar course which provides an opportunity for the study of limited and more specialized aspects of U.S. cinema. Topics may include individual genres, directors, production studios, historical periods, or aspects of independent cinema. Topics vary from year to year according to the instructor's field of specialization.
**fewer than 66 credits remaining in degree programme.*

FMST 338 ***Topics in American Cinema II*** (3 credits)
Prerequisite: Second-year standing.*
A student repeating FMST 337 registers under FMST 338 provided the subject matter is different.
**fewer than 66 credits remaining in degree programme*

FMST 398 ***Special Topics in Film Studies*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course which provides an opportunity for the study of limited and more specialized aspects of film studies. *NOTE C/See §200.3*

FMST 399 ***Special Topics in Film Studies*** (6 credits)
Prerequisite: Written permission of the Department of Cinema.
A course which provides an opportunity for the study of specialized aspects of Film Studies outside the scope of existing courses. *NOTE C/See §200.3*

FMST 409 ***Seminar in Women and Film*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
An advanced course in the study of films made by women, as well as of the representation of women in films. The topics selected for study may vary from year to year and are considered within the context of film history, contemporary feminist philosophy and feminist film theory. Students are expected to conduct independent research for class presentation. *NOTE A/See §200.3*

FMST 411 ***Advanced Studies in Film Genres*** (3 credits)
Prerequisite: Film Studies 211, Film Studies 322 or COMS 310.
An intensive analysis of one or two film genres, which assumes previous experience in film genre studies. The genre is discussed in terms of its structural characteristics and the ways in which it is a product of specific social situations. Weekly screenings.

FMST 413 ***Film Comedy II*** (3 credits)
Prerequisite: Film Studies 313 or COMS 310 or written permission of the Department of Cinema.
A continuation of Film Studies 313 on a more advanced level. Emphasis is placed on theoretical aspects of film comedy and the films of several major comedy directors. Weekly screenings.

FMST 414 ***Seminar in Film Directors I*** (3 credits)
Prerequisite: Eighteen credits in Film Studies and written permission of the Department of Cinema.
A seminar for advanced students which provides for more concentrated study of the work of specific film directors. The director or directors whose films are chosen for study varies from year to year according to the instructor's field of specialization. *NOTE C/See §200.3*

FMST 415 ***Seminar in Film Directors II*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A student repeating Film Studies 414 registers for credit under Film Studies 415 provided the subject matter is different.

FMST 416 ***Seminar in Problems in Film History I*** (3 credits)
Prerequisite: Eighteen credits in Film Studies and written permission of the Department of Cinema.
A seminar for advanced students which provides for the study of limited and more specialized areas of film history. The areas chosen for study vary from year to year according to the instructor's field of specialization. *NOTE C/See §200.3*

FMST 417 ***Seminar in Problems in Film History II*** (3 credits)
Prerequisite: Eighteen credits in Film Studies and written permission of the Department of Cinema.
A student repeating Film Studies 416 registers for credit under Film Studies 417 provided the subject matter is different.

FMST 418 ***Seminar in English-Canadian Film*** (3 credits)
Prerequisite: Film Studies 314, or COMS 316 with written permission of the Department of Cinema.
A seminar in which selected aspects of English-Canadian Film are examined and discussed. The areas chosen for study vary from year to year according to the instructor's field of specialization.

FMST 419 ***Séminaire sur le cinéma québécois*** (3 crédits)
Préalable: Film Studies 315, ou COMS 316 avec permission écrite du département de Cinema.
Un séminaire dans lequel des aspects sélectifs du cinéma québécois sont analysés et discutés. Les sujets d'étude choisis varient d'année en année selon la spécialisation de l'instructeur.

FMST 422 ***Seminar in Film Theory and Criticism*** (3 credits)
Prerequisite: Film Studies 212 and written permission of the Department of Cinema.
Theories including those of Sergei Eisenstein and André Bazin are studied both as explanations of the effects of films and as foundations for film criticism. The relation of contemporary theoretical writings, such as those in film semiology, to film criticism is discussed. Weekly screenings.

FMST 423 ***Seminar in Comparative Stylistic and Formal Analysis*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
An intensive course in the analysis of film style. Films are examined using an analytical projector in order to discover their formal and thematic structures. The contribution of cinematographers, editors, scriptwriters, directors, and performers to the development of a style are discussed. Weekly screenings.

FMST 424 ***Seminar in Film Narrative*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
An examination of conventions of film narrative from a theoretical and historical point of view. Innovations in narrative structure are discussed, and consideration is given to the origin, development, and transformation of narrative traditions in their cultural and aesthetic context.

FMST 425 ***Seminar in Contemporary Film Theory*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A survey and analysis of major recent theoretical approaches to film. Among the topics discussed are: auteurism, semiotics, textual analysis, ideological criticism, psychoanalysis, feminism, and neo-formalism. The seminar includes screenings, discussions of weekly readings and oral presentations by the students. *NOTE A/See §200.3*

FMST 426 ***Professional Internship I*** (3 credits)
Prerequisite: Second-year standing*, enrolment in the Major in Cinema, Option C, Film Studies or the Specialization in Film Studies and written permission of the Department of Cinema.
A Film Studies student who has been employed for not less than 250 hours within the same calendar year in film research, archival work, editing a film publication, or in writing film criticism, may apply for three credits on the understanding that the Department must be satisfied that the work was done under the joint supervision of a qualified professional and a full-time Cinema Faculty member. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 427 ***Professional Internship II*** (3 credits)
Prerequisite: Second-year standing*, enrolment in the Major in Cinema, Option C, Film Studies or the Specialization in Film Studies and permission of the Department of Cinema.
A student repeating Film Studies 426 registers for credit under Film Studies 427. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMST 428 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course of independent study in which the student may explore a specific area of Film Studies.

FMST 429 ***Independent Studies II*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A student repeating Film Studies 428 registers for credits under Film Studies 429 provided the subject matter is different.

FMST 498 ***Special Topics in Film Studies*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A lecture or seminar course for advanced students which provides an opportunity for the study of limited and more specialized aspects of film studies. *NOTE A,C/See §200.3*

Film Animation:

NOTE: A student may register for only one course in which films are produced as a course requirement during each academic session. See §81.70.2

FMAN 312 ***Animation I*** (6 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B, Film Animation; Minor in Film Animation; or written permission of the Department of Cinema, with either Film Production 231 or 6 credits in a studio arts course.
A studio course introducing the theory and practice of film animation. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.

FMAN 313 ***Animation II*** (6 credits)
Prerequisite: Film Animation 312 and written permission of the Department of Cinema
A continuation on a more advanced level of Film Animation 312. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.

FMAN 314 ***Technical Aspects of Film Animation*** (3 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B, Film Animation or the Minor in Film Animation, Film Animation 313, previously or concurrently, and written permission of the Department of Cinema.
A specialized course in which the principles of photography and cinematography are applied to animation, with creative and experimental exercises employing animation cameras, stands, computers and other equipment. The purpose of this course is to allow students to become technically independent and competent.

FMAN 315 ***From Idea to Storyboard*** (3 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B, Film Animation or the Minor in Film Animation; Film Production 231 and Drawing 200, previously or concurrently, and written permission of the Department of Cinema.
Exploration of the visual development of ideas and scripts in a storyboard form. Students participate in creative and experimental exercises which include timing, planning the sound track, and filming the storyboards.

FMAN 316 ***Animation Sound I*** (3 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B, Film Animation, or the Minor in Film Anination and Film Animation 312, previously or concurrently, and written permission of the Department of Cinema.
A course in techniques of sound production for animation, including music, sound effects and voice. Aspects of sound production essential to the animator-director are treated from the initial concept to post-production including studio procedures, recording, editing and mixing. *NOTE A/See §200.3*

FMAN 319 ***Character Animation*** (3 credits)
Prerequisite: Enrolment in the Major in Cinema, Option B, Film Animation, or the Minor in Film Animation and Film Animation 312, previously or concurrently and written permission of the Department of Cinema.
An examination of the fundamentals of character animation, its theory, techniques and application to studio situations. Exercises in character design and dramatization are directed towards the students' particular interests and style. *NOTE A/See §200.3*
NOTE: Previous drawing experience is recommended.

FMAN 398 ***Special Topics in Film Animation*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
An opportunity for study of limited and more specialized aspects of Film Animation. *NOTE C/See §200.3*
NOTE: Students are required to bear the cost of materials.

FMAN 414 ***Animation III*** (6 credits)
Prerequisite: Film Animation 313 and FMST 323, and written permission of the Department of Cinema.
A continuation on a more advanced level of Film Animation 313. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.

FMAN 416 ***Animation Sound II*** (3 credits)
Prerequisite: Third-year standing* in the Major in Cinema, Option B, Film Animation, FMAN 316 and written permission of the Department of Cinema.
A continuation FMAN 316 with special concentration on post-production and experimentation with sound.
**fewer than 33 credits remaining in degree programme.*

FMAN 446 ***Professional Internship I*** (3 credits)
Prerequisite: Second-year standing* in the Major in Cinema, Option B, Film Animation and written permission of the Department of Cinema.
A Film Animation student who has been employed within the film industry for not less than 250 hours within the same calendar year may apply for three credits on the understanding that the Department of Cinema must be satisfied that the work was done under the joint supervision of a qualified professional and a full-time Cinema Faculty member. *NOTE A/See §200.3.*
**fewer than 66 credits remaining in degree programme.*

FMAN 447 ***Professional Internship II*** (3 credits)
Prerequisite: Second-year standing* in the Major in Cinema, Option B, Film Animation and written permission of the Department of Cinema.
A student repeating Film Animation 446 registers for credit under Film Animation 447. *NOTE A/See §200.3.*
**fewer than 66 credits remaining in degree programme.*

FMAN 448 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course of independent study in which the student explores a specific area of Film Animation. *NOTE A,C/See §200.3*

FMAN 449 ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A student repeating Film Animation 448 registers for credit under Film Animation 449 provided the subject matter is different. *NOTE A/See §200.3*

FMAN 498 ***Special Topics in Film Animation*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of film animation. *NOTE A,C/See §2003.*

Film Production:

NOTE: A student may register for only one course in which films are produced as a course requirement during each academic session. See §81.70.2.

FMPR 231 ***Filmmaking I*** (6 credits)
Prerequisite: Enrolment in a Cinema programme, Film Studies 211 or 212, previously or concurrently and written permission of the Department of Cinema.
An introductory course in the theory and practice of filmmaking. This course stresses the individual student's creative efforts in producing films in Super 8 and 16mm formats. Lecture and laboratory. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.

FMPR 331 ***Filmmaking Studio I*** (6 credits)
Prerequisite: Second-year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production, Film Production 231 previously, Film Production 336 concurrently, and written permission of the Department of Cinema.
An intermediate course in the theory and practice of filmmaking, emphasizing the creative possibilities available when 16mm lip sync equipment is not used. Formats include 16mm with wild sound, Super 8 with wild sound, and silent 16mm or Super 8. Students work individually or as small crews, depending on the project and the format.
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.
**fewer than 66 credits remaining in degree programme.*

FMPR 332 ***Filmmaking II*** (6 credits)
Prerequisite: Second-year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production; Film Production 231 and Film Production 337, previously or concurrently; and written permission of the Department of Cinema.
An intermediate course in the theory and practice of filmmaking introducing lip-sync 16mm production. Topics emphasized include the creative possibilities of lip-sync 16mm, the development of ideas for films, and the preparation of these ideas for production, budgeting, production planning, and working with a film crew. Students participate in a number of productions and assume a range of roles while beginning to develop their area of specialization within the production team. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.
**fewer than 66 credits remaining in degree programme.*

FMPR 334 ***Problems and Methods of Film Production and Distribution*** (3 credits)
Prerequisite: Film Production 231.
Topics include organizing a film project, financial aspects of film production and distribution, legal problems, film laboratory procedures, and postproduction operations. *NOTE A/See §200.3*

FMPR 335 ***Acting and Directing Acting for the Screen I*** (3 credits)
Prerequisite: Written permission of the Department of Cinema and either Film Production 331 or 332, previously or concurrently, or six credits in Theatre Performance.
A studio course for Cinema and Theatre students which explores directing and performing for film primarily through exercises recorded on video for analysis. Both performers and directors examine acting and directing acting for the camera through such topics as role preparation, character development, and performance continuity. *NOTE A/See §200.3*

FMPR 336 ***Technical Aspects for Filmmaking Studio*** (6 credits)
Prerequisite: Film Production 331 concurrently and written permission of the Department of Cinema.
A course in which specialized techniques of cinematography, non-sync sound, and graphic and photographic reproduction on film/video are introduced and developed by Filmmaking Studio students. Included are creative and experimental practice employing Bolex, advanced Super 8, and video cameras, the optical printer, the animation stand, sound and editing equipment and techniques such as filtration, titling and in-camera effects.
NOTE: Students who have taken FMPR 338 previously cannot take this course for credit.

FMPR 337 ***Technical Aspects of Filmmaking*** (6 credits)
Prerequisite: Enrolment in the Specialization in Film Production or the Major in Cinema, Option A, Film Production; and Film Production 332 concurrently and written permission of the Department of Cinema.
Creative and experimental practices in cinematography, sound, and other components of filmmaking. The complex technology of filmmaking is emphasized as forming a basis for the creative use of the medium. *NOTE A/See §200.3*

FMPR 339 ***Montage in Filmmaking*** (3 credits)
Prerequisite: Written permission of the Department of Cinema and Film Production 331 or 332, previously or concurrently.
Fiction and nonfiction film-editing, emphasizing dynamic and continuity cutting and cutting-room techniques. Activities include editing the image in synchronized double system, cutting music and sound effects, preparation for and supervision of the rerecording. *NOTE A/See §200.3*

FMPR 341 ***Writing for Film I*** (3 credits)
Prerequisite: Film Production 231 and written permission of the Department of Cinema.
An introduction to writing for film, with special emphasis on the relation of the script to filmmaking. Students are expected to submit work of their own for discussion, analysis, and possible production in filmmaking courses. *NOTE A/See §200.3*

FMPR 343 ***Production Design*** (3 credits)
Prerequisite: Second-year standing* in Film Production, Film Animation or Theatre Department programmes and written permission of the Department of Cinema.
A practical examination of the visual aspects of film production. Topics in production design considered may include texture and visual styles, the collaborative process, project management, and the nature of constraints which apply to student and independent productions. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme*

FMPR 398 ***Special Topics in Film Production*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course which provides an opportunity for the study of specialized aspects of Film Production outside the scope of existing courses. *NOTE C/See §200.3*

FMPR 399 ***Special Topics in Film Production*** (6 credits)
Prerequisite: Written permission of the Department of Cinema.
A course which provides an opportunity for the study of specialized aspects of Film Production outside the scope of existing courses. *NOTE C/See §200.3*

FMPR 431 ***Filmmaking Studio II*** (6 credits)
Prerequisite: Third-year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production, Film Production 331 and 336, and written permission of the Department of Cinema.
A continuation of Film Production 331.
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.
**fewer than 33 credits remaining in degree programme.*

FMPR 432 ***Filmmaking III*** (6 credits)
Prerequisite: Third-year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production, Film Production 332 and 337 and written permission of the Department of Cinema.
A continuation of Film Production 332, with students working on more advanced filmmaking projects. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.
**fewer than 33 credits remaining in degree programme.*

FMPR 433 ***Filmmaking Workshop*** (6 credits)
Prerequisite: Third-year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production, Film Production 332 and 337 and written permission of the Department of Cinema.
A course in the theory and practice of filmmaking in 16mm wild sound and Super 8 formats, with some access to 16mm lip-sync equipment for qualified students. The development of concepts of filmmaking introduced in Film Production 332 is continued using these formats.
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.
**fewer than 33 credits remaining in degree programme.*

FMPR 435 ***Acting and Directing Acting for the Screen II*** (3 credits)
Prerequisite: Film Production 335 and written permission of the Department of Cinema.
A continuation of Film Production 335 on a more advanced level.

FMPR 438 ***Cinematography*** (3 credits)
Prerequisite: Enrolment in the Specialization in Film Production, or the Major in Cinema, Option A, Film Production, Film Production 336 or 337, and written permission of the Department of Cinema.
An advanced course in camera and light for cinema. The contribution of cinematography to filmmaking is investigated through studio and location shooting exercises, lighting exercises and lectures. Subjects such as film stocks, lenses, filters, and camera movement are discussed as elements in the creative process of filmmaking. *NOTE A/See §200.3*

FMPR 439 ***Advanced Montage in Filmmaking*** (3 credits)
Prerequisite: Film Production 339 and written permission of the Department of Cinema.
A continuation of Film Production 339.

FMPR 440 ***Sound for Film*** (3 credits)
Prerequisite: Enrolment in the Specialization in Film Production, or the Major in Cinema, Option A, Film Production, Film Production 336 or 337, and written permission of the Department of Cinema.
An advanced course in sound and its use in cinema. The contribution of sound to filmmaking is investigated through studio and location recording exercises and through demonstrations.

FMPR 441 ***Writing for Film II*** (3 credits)
Prerequisite: Film Production 341 and written permission of the Department of Cinema.
A continuation of Film Production 341 on a more advanced level.

FMPR 442 ***Optical Printer Practice*** (3 credits)
Prerequisite: Film Production 336 or 337 or Film Animation 314; and written permission of the Department of Cinema.
A film production course assisting students in the understanding and application of advanced optical printer technology and aesthetics. *NOTE A/See §200.3*

FMPR 446 ***Professional Internship I*** (3 credits)
Prerequisite: Second-year standing* in the Specialization in Film Production, or the Major in Cinema, Option A, Film Production and written permission of the Department of Cinema.
A Film Production student who has been employed within the film industry for not less than 250 hours within the same calendar year may apply for 3 credits on the understanding that the Department of Cinema must be satisfied that the work was done under the joint supervision of a qualified professional and a full-time Cinema Faculty member. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*

FMPR 447 ***Professional Internship II*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A student repeating Film Production 446 for credit registers under Film Production 447. *NOTE A/See §200.3*

FMPR 448 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course of independent study in which the student explores a specific area of Film Production. *NOTE A,C/See §200.3*

FMPR 449 ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A student repeating Film Production 448 registers for credit under Film Production 449. *NOTE A/See §200.3*

FMPR 450 ***Film Production Specialization Seminar*** (3 credits)
Prerequisite: Written permission of the Department of Cinema and third-year standing* in the Specialization in Film Production.
A seminar offering in-depth, practical approaches to artistic and technical situations. This course brings together all students in the Specialization in Film Production.
**fewer than 33 credits remaining in degree programme.*

FMPR 451 ***Advanced Project Internship I*** (3 credits)
Prerequisite: Second year standing* in the Specialization in Film Production or the Major in Cinema, Option A, Film Production, and Film Production 331 or 332 previously or concurrently, and written permission of the Department of Cinema.
A film production student who contributes in a key position to a graduate project in the Film Production MFA programme may apply for credits on the understanding that the application take place prior to the production and is authorized by the faculty members responsible for both programmes.
**fewer than 66 credits remaining in degree programme*

FMPR 452 ***Advanced Project Internship II*** (3 credits)
Prerequisite: FMPR 451 and written permission of the Department of Cinema.
A student repeating FMPR 451 for credit registers under FMPR 452.

FMPR 498 ***Special Topics in Film Production*** (3 credits)
Prerequisite: Written permission of the Department of Cinema.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of film production. *NOTE A,C/See §200.3*

FMPR 499 ***Special Topics in Film Production*** (6 credits)
Prerequisite: Written permission of the Department of Cinema.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of film production. *NOTE A,C/See §200.3*

80.70.2 FILMMAKING
Courses in which films are produced as a course requirement are:
Film Animation 312^6, 313^6, 414^6
Film Production 231^6, 331^6, 332^6, 431^6, 432^6, 433^6

81.70.3 COMMUNICATION STUDIES FILM COURSES
NOTE: for course descriptions see §31.070.

Students enrolled in the Specialization in Film Studies, the Specialization in Film Production, or the Major in Cinema may select up to 12 credits from the Communication Studies courses listed below as part of their required Film Studies elective credits. Similarly, students enrolled in the Minor in Cinema may select up to 6 credits from the Communication Studies courses listed below, plus other Communication Studies courses, with the permission of the coordinator of Film Studies, as part of the required 18 cinema elective credits.
These credits (courses) must be considered as Film Studies elective credits for degree purposes.

COMS 306 Documentary Film (3 credits)
COMS 307 Hollywood in the Silent Era (3 credits)

COMS 308 The German Expressionist Movement (3 credits)
COMS 309 The Revolutionary Soviet Cinema (3 credits)
COMS 310 The Hollywood Genres (3 credits)
COMS 311 The Classic French Cinema (3 credits)
COMS 312 La Nouvelle Vague (3 credits)
COMS 313 Ingmar Bergman and the Scandinavians (3 credits)
COMS 314 The Italians, from Neo-Realism to Today (3 credits)
COMS 315 Shakespeare in the Cinema (3 credits)
COMS 316 The Canadian Cinema (3 credits)

81.80 Contemporary Dance

Chair
ELIZABETH LANGLEY, *Associate Professor*

Assistant Professor
SYLVIE PANET-RAYMOND

Students are responsible for satisfying their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.

The superscript indicates credit value.

66 BFA Major in Contemporary Dance
18 Dance 200^6, 300^6, 400^6
12 Dance 210^6, 310^6, 330^6, 410^6
18 Dance 211^3, 313^3, 320^6, 420^6
3 Theatre Performance 201^3
3 Design Art 202^3
6 Music 200^6 or, if exempt, Music 210^6
6 Electives from within the Faculty of Fine Arts, excluding courses offered in Dance.

81.80.1 ADMISSION TO CONTEMPORARY DANCE

There is a distinct admission procedure for admission to the Major in Contemporary Dance in addition to the normal admission process of Concordia University. All applicants to Contemporary Dance are required to attend an audition as part of the admission process.

Applicants must contact the Department of Contemporary Dance before Friday, March 15, 1991 to arrange their audition and for detailed information regarding admission to dance.

DANC 200 ***Workshop in Dance I*** (6 credits)

Prerequisite: Dance 210, previously or concurrently and enrolment in the Major in Contemporary Dance or written permission of the Department of Contemporary Dance.

Studies in dance, emphasizing the expressive possibilities of movement. Styles of dance are introduced and projects for performance are explored, with consideration being given to the role of visual, acoustic, and verbal elements in dance. Studio: 4 hours per week. Laboratory: 2 hours per week. *NOTE A/See §200.3*

DANC 210 ***Body Movement I*** (6 credits)

Prerequisite: Enrolment in the Major in Contemporary Dance or written permission of the Department of Contemporary Dance.

The technical development of suppleness, strength, coordination, and kinetic awareness is emphasized. Body movement is discussed and developed as preparation for dance. Studio: 6 hours per week.

DANC 211 ***Dance Traditions*** (3 credits)

A survey of the history of dance, including relations between older dance traditions and styles of modern dance. Lecture course.

DANC 240* ***Principles of Contemporary Dance*** (6 credits)

Prerequisite: Written permission of the Department of Contemporary Dance.

A survey of technical skills, improvisation and dance composition. Studio: 4 hours per week. Laboratory: 2 hours per week.

**Students enrolled in the Major in Contemporary Dance may not take this course for credit towards their degree programme.*

DANC 261 ***Summer Workshop in Dance I*** (3 credits)

Prerequisite: Written permission of the Department of Contemporary Dance.

Sequences of studio sessions which may include body movement, improvisation, performance technique and choreography. Studio: 4 hours per week. Laboratory: 2 hours per week.

NOTE: Students enrolled in the Major in Contemporary Dance may not take this course for credit towards their programme requirements.

DANC 262 ***Summer Workshop in Dance II*** (3 credits)
Prerequisite: Written permission of the Department of Contemporary Dance.
A continuation of Dance 261. Studio: 4 hours per week. Laboratory: 2 hours per week.
NOTE: Students enrolled in the Major in Contemporary Dance may not take this course for credit towards their programme requirements.

DANC 300 ***Workshop in Dance II*** (6 credits)
Prerequisite: Dance 200, and enrolment in Major in Contemporary Dance, or written permission of the Department of Contemporary Dance.
A continuation of Dance 200. Studio: 4 hours per week. Laboratory: 2 hours per week.

DANC 310 ***Body Movement II*** (6 credits)
Prerequisite: Dance 210 and 300, previously or concurrently.
A continuation of Dance 210. Studio: 6 hours per week.

DANC 313 ***Aspects of Production for Dance*** (3 credits)
Prerequisite: Written permission of the Department of Contemporary Dance.
A study of sources and materials used in the technical aspects of dance production. Topics may include costume, make-up, audio-visual support. Lecture course.

DANC 320 ***Choreography I*** (6 credits)
Prerequisite: Dance 300, previously or concurrently, and written permission of the Department of Contemporary Dance.
The organization of movement, space, and time into dance performances. The process of choreographic creation is followed through stages of originating the idea, developing the theme, rehearsing, and performing. Student works are performed. Studio: 4 hours per week. Practice laboratory: 2 hours per week. Rehearsal: 4 hours per week.

DANC 330 ***Principles of Anatomy and Body Movement*** (6 credits)
Prerequisite: Dance 210 and written permission of the Department of Contemporary Dance.
A workshop of movement fundamentals based on the practical understanding of anatomy and dance technique. Studio: 6 hours per week.

DANC 398 ***Special Topics in Dance*** (3 credits)
Prerequisite: Written permission of the Department of Contemporary Dance.
Topics vary from year to year, taking into account the special aptitudes of instructors and students. Studio: 6 hours. *NOTE C/See §200.3*

DANC 400 ***Workshop in Dance III*** (6 credits)
Prerequisite: Dance 300, and enrolment in the Major in Contemporary Dance, or written permission of the Department of Contemporary Dance.
A workshop that provides opportunities for the extension of creative potential, improvement of performance abilities and development of methodologies in research, using movement and other related art forms.

DANC 410 ***Body Movement III*** (6 credits)
Prerequisite: Dance 400, previously or concurrently, and enrolment in the Major in Contemporary Dance, or written permission of the Department of Contemporary Dance.
A continuation of Dance 310. Studio: 6 hours per week.

DANC 420 ***Choreography II*** (6 credits)
Prerequisite: Dance 320, enrolment in Major in Contemporary Dance and written permission of the Department of Contemporary Dance.
A continuation of Dance 320. Studio: 4 hours per week. Practice laboratory: 2 hours per week. Rehearsal: 4 hours per week.

DANC 499 ***Topics in Dance*** (6 credits)
Prerequisite: Written permission of the Department of Contemporary Dance.
Advanced choreography where movement shares equal emphasis with all other arts developed into multi-media theatre. Studio: 4 hours per week. Practice laboratory: 2 hours per week. Rehearsal: 4 hours per week.

81.90 Design Art

Chair
CHRISTOPHER GABRIEL-LACKI, *Associate Professor*

Associate Professors
LOUIS HAMEL
SUSAN HUDSON

Assistant Professors
KAT O'BRIEN
DON RITTER
ANDREA WOLLENSAK

The Department of Design Art offers a three-year undergraduate programme providing a firm foundation for what is essentially a multi-faceted discipline. It is the intention of this programme to have students explore the various dimensions of design art in order that they may understand and eventually attend to the design needs of society in an innovative and responsible manner.

Emphasis is placed on design as a visual and aesthetic discipline reflecting creativity. At the same time, the programme recognizes the integral nature of design as a fusion of many specialties and human concerns in the contemporary world. It adopts a multi-disciplinary approach, taking advantage of the University's wide horizon of intellectual and social concerns. It is considered vital that students recognize the interdependence of design, fine arts, humanities and sciences. The need for personal creative expression and aesthetic sensitivity must be balanced by an understanding of the cultural impact, societal applications and ethical responsibilities of the design artist.

Fundamental to the programme is the student's acquisition of the history of theory and practice in this field, together with an understanding of contemporary critical issues and innovative practices. In all of the theoretical and practical components of the programme, the curriculum emphasizes creative experimentation and imaginative risk-taking. The student is encouraged to develop a keen sense of critical analysis through a process of rational inquiry. Further, the student is encouraged to develop and utilize powers of intellectual curiosity, flexibility and imagination in problem-solving. Visual literacy, articulate verbal and written expression, together with an understanding of fundamental technical skills are all integral components of the programme.

Students are responsible for fulfilling their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.

The superscript indicates credit value.

72	**BFA Major in Design Art**
30	Design Art 200^6, 210^6, 300^6, 310^6, 400^6
6-12	Design Art 422^6, 423^6
0-6	Design Art 410^6, 424^6, 425^6, 440^6, 499^6
6	Drawing 200^6
6	Studio arts* elective chosen in consultation with an adviser
6	Art 200^6 or, if exempt, studio arts elective outside the Department of Design Art
6	Art History 260^6
6	Art History elective or Art 261

**Chosen from the following departments: Design Art, Painting and Drawing; Printmaking and Photography; Sculpture Ceramics and Fibres.*

81.90.1 ADMISSION TO THE MAJOR IN DESIGN ART

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to programmes in the Major in Design Art.

All applicants must submit a portfolio as part of the admission process. Accepted applicants who have the *CEGEP 10.6 profile* (see §81.10.1) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may be granted exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works larger than 20 x 24 inches (50 x 60 centimeters) and three-dimensional works must be submitted in slide form.
6. Portfolios should be presented in a sturdy folder; works should be flat and unframed and well-presented.
7. Out-of-town applicants may submit photographs and/or slides of their work.

In addition:

8. The portfolio should demonstrate creative potential as a designer/artist. Works presented must represent an ability to draw, to compose, to use colour and to work in other visual mediums including work in three dimensions.

9. A letter of intent written in either English or French must be submitted to the Department Office by the applicants when arranging an interview appointment. The letter must state the reason for applying to the Design Art programme and the ways in which the applicant's education background, work experience and general interests can act as a preparation for the Design Art programme.
10. Applicants are required to attend an interview during which they will be required to answer questions pertinent to Design Art and other disciplines. Applicants must contact the Department of Design Art early in March (before the deadline date of March 15) for an appointment time. Late applicants will be considered when appropriate. Please contact the Department for additional information.
11. Applicants are required to submit a copy of their transcript to the Department office when arranging an interview appointment.
12. Portfolios must be brought by the applicants to their interview.

NOTE: Students are required to bear the cost of materials in studio arts courses.

DART 200 ***Design Art Theory and Practice*** (6 credits)
Prerequisite: Art 200, or exemption, or Art 200 concurrently and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
An introduction to design art concepts and methods. Content focuses on the use of artistic innovation in visual, perceptual and structural elements; including line, shape, colour, mass, materials, and their organization. *NOTE A/See §200.3*

DART 202 ***Design in the Arts I*** (3 credits)
Prerequisite: Written permission of the Department of Design Art, Major in Contemporary Dance or second-year standing* in a Fine Arts degree programme.
A foundation course in the elements and principles of design for Fine Arts students, with concentrations outside of studio arts. The focus is on process rather than product creation in this theoretical and practical preparation for design problems in the student's area of concentration. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*
NOTE: Students in a specialization/major in a studio arts department may not take this course for credit in their degree programme.

DART 203 ***Design in the Arts II*** (3 credits)
Prerequisite: Design Art 202.
A continuation of Design Art 202. *NOTE A/See §200.3*
NOTE: Students in a specialization/major in a studio arts department may not take this course for credit in their degree programme.

DART 210 ***Introduction to Research Methodology in Design Art*** (6 credits)
Prerequisite: Art 200, or exemption, or Art 200 concurrently and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A project-based study providing basic experiences in research methodology including light and colour theories. The content of this course focuses on the personal, economic and cultural implications of design. Knowledge from a variety of academic and other disciplines is applied to the design art process. *NOTE A/See §200.3*

DART 300 ***Individual Projects in Design Art (Analysis and Application)*** (6 credits)
Prerequisite: Design Art 200 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
Problem solving in Design Art. Individual projects involving experimentation and innovation are completed and analysed in terms of their application to the assigned objectives. *NOTE A/See §200.3*

DART 310 ***Group Projects in Design Art (Research Coordination)*** (6 credits)
Prerequisite: Design Art 200, 210; Design Art 300, previously or concurrently, and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
Problem solving in Design Art. Group projects, involving experimentation and innovation are completed and analysed in terms of their application to the assigned objectives. Team research and coordination are major requirements of this course. *NOTE A/See §200.3*

DART 400 ***Design Art Seminar*** (6 credits)
Prerequisite: Design Art 300, previously or concurrently, and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
An advanced study of recent developments in visual thinking in design art. Content may include workshops, visiting lecturers and field trips. Students are required to attend additional workshops and lectures outside of the course time. *NOTE A/See §200.3*

DART 410 ***The Computer as a Design Tool*** (6 credits)
Prerequisite: Design Art 300 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A project-based course working with computers for design art purposes.

DART 422 ***Experimental Design: Image*** (6 credits)
Prerequisite: Design Art 300 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A design studio in which innovative concepts, techniques and tools of image-making are investigated and developed. *NOTE A/See §200.3*

DART 423 ***Experimental Design: Object*** (6 credits)
Prerequisite: Design Art 300 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A design studio in which innovative concepts, techniques and tools of object-making are investigated and developed. *NOTE A/See §200.3*

DART 424 ***Applied Design: Image*** (6 credits)
Prerequisite: Design Art 300 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A design studio course in which individual student projects, based upon social and environmental issues, address the use of image in the marketplace. A range of practice employed in contemporary image-making is investigated. *NOTE A/See §200.3*

DART 425 ***Applied Design: Object*** (6 credits)
Prerequisite: Design Art 300 and either enrolment in the Major in Design Art or written permission of the Department of Design Art.
A design studio course in which individual student projects, based upon social and environmental issues, address the use of object in the marketplace. *NOTE A/See §200.3*

DART 440 ***Independent Study*** (6 credits)
Prerequisite: Written permission of the Department of Design Art.
Independent study in which the student explores a special area of design art. *NOTE A/See §200.3*

DART 499 ***Special Topics in Design Art*** (6 credits)
Prerequisite: Written permission of the Department of Design Art.
A course of independent study in which the student explores a special area of design art. *NOTE A/See §200.3*

81.100 Music

Chair
SHERMAN FRIEDLAND, *Associate Professor*

Professor
BERNARD LAGACÉ

Associate Professors
LISELYN ADAMS
KEVIN AUSTIN
WOLFGANG BOTTENBERG
PHILIP COHEN
ALAN CROSSMAN
CHARLES ELLISON
ANDREW HOMZY
CHRISTOPHER JACKSON

Assistant Professors
JERI BROWN
MARK CORVIN
JAN JARCZYK

Students are responsible for fulfilling their particular degree requirements; hence, the following sequences must be read in conjunction with §81.20.
The superscript indicates credit value.

SPECIALIZATION IN MUSIC

The Faculty of Fine Arts offers four Specialization programmes in Music, which consist of 66 credits each.

Students applying for entrance to the specializations are accepted into the Major in Integrative Music Studies. Upon completion of thirty credits, students may apply for transfer into one of the specializations. Acceptance into a specialization is based on the student's general academic performance in all University courses, but especially in the Music courses.

Students are expected to participate in public performances as part of any specialization, and are required to do so in the Specializations in Music Performance Studies and Jazz Studies.

66 BFA Specialization in Jazz Studies

21 Contemporary Music Studies 300^6, Integrative Music Studies 200^{6*}, 310^6, Music Performance Studies 221^3
6 Music 230^6 or Music 231^3 and 331^3
6 Music History 200^6 or, if exempt, Music History electives
6 Music History electives
18-24 Contemporary Music Studies 330^6, 401^3, 402^3, Music Performance Studies 330^6, 430^6, Integrative Music Studies 331^3, 332^3, 431^3, 432^3
3-9 Department of Music electives, excluding Music 200 and 210, chosen in consultation with a Music adviser

**With permission of the Department of Music, students with exemption for Integrative Music Studies 200 substitute Integrative Music Studies 300.*

66 BFA Specialization in Music Performance Studies

21 Integrative Music Studies 200^{6*}, 310^6, Music Performance Studies 221^3, 490^6
6 Music 230^6 or Music 231^3 and 331^3
6 Music History 200^6 or, if exempt, Music History electives
6 Music History electives
6 Music 330^6, Music Performance Studies 390^6
12 Music Performance Studies 311^3, 312^3, 321^3, 322^3, 411^3, 412^3, 421^3, 422^3
9 Music Performance Studies 370^6, 431^3, 432^3 or Department of Music electives, excluding Music 200 and 210, chosen in consultation with a Music adviser

**With permission of the Department of Music, students with exemption for Integrative Music Studies 200 substitute Integrative Music Studies 300.*

66 BFA Specialization in Music Theory/ Composition

21 Integrative Music Studies 200^{6*}, 300^6, 310^6, Music Performance Studies 221^3
6 Music 230^6 or Music 231^3 and 331^3
6 Music History 200^6 or, if exempt, Music History electives
6 Music History electives
6-12 Integrative Music Studies 400^6, Contemporary Music Studies 310^6, 320^6, 330^6
6 Integrative Music Studies 320^6, 331^3, 332^3, Contemporary Music Studies 410^6, 420^6, 430^6
9-15 Department of Music electives, excluding Music 200 and 210, chosen in consultation with the Music adviser

**With permission of the Department of Music, students with exemptions for Integrative Music Studies 200 substitute Integrative Music Studies 300.*

66 BFA Specialization in Selected Music Studies

15 Integrative Music Studies 200^{6*}, 310^6, Music Performance Studies 221^3
6 Music 230^6 or Music 231^3 and 331^3
6 Music History 200^6 or, if exempt, Music History electives
6 Music History electives
3-6 Music 491^3, 492^3

27-30 Department of Music electives, excluding Music 200 and 210, chosen in consultation with a Music adviser

**With permission of the Department of Music, students with exemptions for Integrative Music Studies 200 substitute Integrative Music Studies 300.*

Eligibility:
Completion of 30 credits, with B average or better.

Entrance:
Submission and approval of plan of course work and Special Project (Music 491).

Review:
Upon completion of the courses in this Specialization, the Special Project is evaluated by the appropriate Review Committee. The type of evaluation used depends upon the nature of the project: exhibition, concert, recording, essay, musical production, etc.

54 BFA Major in Integrative Music Studies

21 Music 210^6, Music Performance Studies 221^3, Integrative Music Studies 200^{6*}, 310^6
3-6 Music 230^6, 231^3
6 Music History 200^6 or, if exempt, Music History electives
6 Music History electives
15-18 Department of Music electives, excluding Music 200

**With permission of the Department of Music, students with exemption for Integrative Music Studies 200 substitute Integrative Music Studies 300.*

24 Minor in Music

6 Music 210^6 (or, if exempt, music electives selected in consultation with a Music adviser)
18 Music electives chosen in consultation with a Music adviser

NOTE: A student without the necessary music background must complete Music 210 as a prerequisite to other music courses.

81.100.1 ADMISSION TO PROGRAMMES IN MUSIC

The Department of Music has a distinct admission procedure in addition to the normal admission process of Concordia University. All applicants (to Music programmes) are required to attend an interview/audition as part of the admission process. At the time of their interview they will be required to write a Theory Placement Test (for placement in theory courses).
Applicants are required to contact the Department of Music before March 15 to arrange their appointments and for additional information regarding admission procedures. Applicants normally begin their studies as Majors in Integrative Music Studies.

81.100.2 ADMISSION TO COURSES IN MUSIC FOR NON-MUSIC STUDENTS

Specific procedures must be followed by all non-music Majors wishing to register in the Department of Music:

a) Students who wish to register for courses which have a theory prerequisite must write the Theory Placement Test. They are advised to contact the Department at least two weeks before their registration appointment date.
b) Students who wish to sing or play an instrument must contact the Department for more information concerning audition and registration for Music Performance courses.

81.100.3 ENSEMBLE AUDITIONS

All Music Majors and Non-Music students wishing to register for a music ensemble, the orchestra, the choirs, jazz ensembles, chamber music, etc. must contact the Department of Music at least two weeks prior to registration to arrange an audition.

81.100.4 KEYBOARD EXAM

All students in the BFA programmes in the Department of Music must take and pass a keyboard exam as a graduation requirement.

1. A copy of the examination will be given to each new student at the time of his/her initial advising appointment for course selection.
2. Methods of preparing for the exam are as follows:
   a) Independently securing private study on a piano outside the University;
   b) Taking 3 credits of piano as private study within a student's course sequence.
3. Students are strongly advised to satisfy this requirement early in their sequence of courses.

Music:

For specific information regarding entrance to courses in the Department of Music please see above.

MUSI 200 ***Musical Literacy*** (6 credits)
An intensive seminar/workshop in theory and aural training designed to extend musical literacy for the student with limited background. Classroom and laboratory.
NOTE: Students in a Major, Minor or Specialization programme in the Department of Music may not take this course for credit toward their degrees.

MUSI 210 ***Theory/Aural Training*** (6 credits)
Prerequisite: Music 200 or exemption.
An extensive course in musicianship, including music theory, harmony, counterpoint, aural training. *NOTE A/See §200.3*
NOTE: Students enrolled in any Specialization offered by the Department of Music may not apply credits for this course toward their concentration requirements.

MUSI 223 ***Understanding Music*** (3 credits)
A course in analytical listening for the student who has little or no musical background. The works studied represent the major styles and idioms of Western music. *NOTE A/See §200.3*

MUSI 230 ***Private Study BI*** (6 credits)
Prerequisite: Written permission of the Department of Music.
This course offers individual vocal or instrumental instruction in an approved area of music co-ordinated with the student's programme. *NOTE A/See §200.3*
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 231 ***Private Study AI*** (3 credits)
Prerequisite: Written permission of the Department of Music.
This course offers individual vocal or instrumental instruction in an approved area of music co-ordinated with the student's programme.
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 330 ***Private Study BII*** (6 credits)
Prerequisite: Music 230 or Music 231 and 331, and written permission of the Department of Music.
Continuation of Music 230. *NOTE A/See §200.3*
NOTE: Students enrolled in the Specialization in Music Performance Studies register in MPER 390.
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 331 ***Private Study AII*** (3 credits)
Prerequisite: Music 231 and written permission of the Department of Music.
Continuation of Music 231.
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 430 ***Private Study BIII*** (6 credits)
Prerequisite: Music 330 and written permission of the Department of Music.
Continuation of Music 330. *NOTE A/See §200.3*
NOTE: Students enrolled in the Specialization in Music Performance Studies register in MPER 490.
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 431 ***Private Study AIII*** (3 credits)
Prerequisite: Music 331 and written permission of the Department of Music.
A continuation of Music 331.
NOTE: Students are required to assume part of the cost of private lessons.
NOTE: Upon the recommendation of the individual instructor, public performance may be required as part of the course.

MUSI 491 ***Special Project in Music*** (3 credits)
Prerequisite: Written permission of the Department of Music.
This course is intended for students enrolled in the Specialization in Selected Music Studies. It affords an opportunity for extensive development of the final project under the direction of a Faculty member. The content of this course varies according to the particular area being studied.
NOTE: Students repeating Music 491 register for Music 492 for credit provided the subject matter is different.
NOTE: If the special project is within the realm of performance, the student is required to participate in public performances.

MUSI 492 ***Special Project in Music*** (3 credits)
Prerequisite: Music 491 and written permission of the Department of Music.
Continuation of Music 491.
NOTE: If the special project is within the realm of performance, the student is required to participate in public performances.

Contemporary Music Studies:

CMUS 200 ***The Language of Jazz*** (6 credits)
Prerequisite: Written permission of the Department of Music.
An introduction to the syntax, style, aesthetics and sociology of jazz. The complete spectrum of styles and artists serve as the basis of materials for the course. *NOTE A/See §200.3*

CMUS 300 ***Studio Music I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A workshop programme in selected jazz, rock, popular, and related styles. The study includes ensemble playing, improvisation, score reading, jazz theory, and arranging. Practice period/conference. *NOTE A/See §200.3*
NOTE: Students are required to participate in public performances.

CMUS 310 ***Electroacoustic Music I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop in electroacoustic music with a basic introduction to composition, history, acoustics and psychoacoustics through a series of directed studies involving tape editing, recording, musique concrète, processing of analog synthesis. The course also introduces recent technological developments including digital signal processing, computer applications and MIDI. Classroom and laboratory. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of materials.

CMUS 320 ***Music Composition I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop in traditional and contemporary composition. Emphasis is on the development of the individual's compositional skills. *NOTE A/See §200.3*

CMUS 330 ***Jazz Composition I*** (6 credits)
Prerequisite: INMS 331 and 332 and written permission of the Department of Music.
A seminar/workshop in jazz composition. After an examination of components of composition from the jazz repertoire, students write original music based on the Blues, song forms and such extended forms as those in the style of Be-bop, Bossa Nova, Ragtime, and Modal Jazz. *NOTE A/See §200.3*

CMUS 401 ***Studio Music II*** (3 credits)
Prerequisite: Contemporary Music Studies 300, or written permission of the Department of Music.
An intensive study of selected problems in the development of studio musicianship. The areas covered are determined by specific class needs. Practice period/conference. This is a full-year course. *NOTE A/See §200.3*
NOTE: Students are required to participate in public performances.

CMUS 402 ***Studio Music III*** (3 credits)
Prerequisite: Contemporary Music Studies 401, or written permission of the Department of Music.
Continuation of Contemporary Music Studies 401. This is a full-year course. *NOTE A/See §200.3*
NOTE: Students are required to participate in public performances.

CMUS 410 ***Electroacoustic Music II*** (6 credits)
Prerequisite: Contemporary Music Studies 310.
A seminar/workshop in electroacoustics with continued work in composition, history, and sound technology through a series of directed studies involving digital system processing, multi-track studio techniques, digital synthesis and sampling. Technological developments, computer applications, MIDI and contemporary compositional techniques are explored in depth. Classroom and laboratory. *NOTE A/See §200.3*
NOTE: Students are required to participate in public performances.

CMUS 420 ***Music Composition II*** (6 credits)
Prerequisite: Contemporary Music Studies 320 and written permission of the Department of Music.
Continuation of Contemporary Music Studies 320. *NOTE A/See §200.3*

CMUS 430 ***Jazz Composition II*** (6 credits)
Prerequisite: Contemporary Music Studies 330.
Continuation of Contemporary Music Studies 330. *NOTE A/See §200.3*

CMUS 446 ***Electroacoustic Music Seminar/Workshop*** (3 credits)
Prerequisite: Contemporary Music Studies 410.
A seminar/workshop for advanced students providing an opportunity for continued study in electroacoustics through a series of short preparatory studies leading to the completion of a single major project. An interdisciplinary aspect to the final project is encouraged. Classroom and laboratory. *NOTE C/See §200.3*
NOTE: Students are required to bear the cost of materials.

CMUS 447 ***Electroacoustic Music Seminar/Workshop*** (3 credits)
Prerequisite: Contemporary Music Studies 446.
A seminar/workshop for advanced students in which investigation into specific areas of electroacoustics

leads to the completion of a single major project. An interdisciplinary aspect to the final project is encouraged. Classroom and laboratory.
NOTE: Students are required to bear the cost of materials.

CMUS 471* ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student-designed course of study that focuses on an approved area(s) of music composition, and involves consultation with an adviser. *NOTE C/See §200.3*
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

CMUS 472* ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student repeating Contemporary Music Studies 471 registers for Contemporary Music Studies 472 for credits.
**Students may count a maximum of 9 credits in independent studies towards their degree programmes.*

CMUS 498 ***Special Topics in Composition*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop in composition. Emphasis in any given year may be in one or more of the following: free composition, music for the media, technological, experimental musics. *NOTE A,C/See §200.3*

Integrative Music Studies:

INMS 200 ***Theory/Composition/Analysis I*** (6 credits)
Prerequisite: Music 210 or exemption.
A workshop in theory, composition, analysis, and related areas. The course explores one or more traditional, contemporary, or experimental approaches to the organization and uses of sound materials. Classroom and laboratory. *NOTE A/See §200.3*

INMS 300 ***Theory/Composition II*** (6 credits)
Prerequisite: Integrative Music Studies 200 or equivalent.
A study that co-ordinates exercises in part-writing and harmony with composition. Students work in a variety of traditional and contemporary forms, styles, and media. Classroom and laboratory. *NOTE A/See §200.3*

INMS 310 ***Aural Perception: Analytical Hearing I*** (6 credits)
Prerequisite: Music 210 or written permission of the Department of Music.
A course in aural training to develop auditory instinct and intellectual understanding. Hearing skills are developed through exercises in aural concentration, recall, reproduction, imagination, analysis, and transcription. The sound materials used range from traditional to electronic-acoustic, natural, and mechanical. Classroom and laboratory. *NOTE A/See §200.3*

INMS 320 ***Comparative Analysis I*** (6 credits)
Prerequisite: Integrative Music Studies 200 or exemption.
Development of analytical methodology. Study of selected works representing various forms and styles from different historical periods. *NOTE A/See §200.3*

INMS 331 ***Instrumentation/Arranging I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A study of the capabilities and uses of instruments in a variety of musical situations ranging from small ensembles to full orchestra. The areas covered are determined by class needs. Workshop and laboratory. *NOTE A/See §200.3*

INMS 332 ***Instrumentation/Arranging II*** (3 credits)
Prerequisite: Integrative Music Studies 331.
Continuation of Integrative Music Studies 331. *NOTE A/See §200.3*

INMS 400 ***Theory/Composition/Analysis III*** (6 credits)
Prerequisite: Integrative Music Studies 300, or exemption.
A continuation of Integrative Music Studies 300 at a more advanced level. Study of writing techniques of the late nineteenth and twentieth centuries, and work in counterpoint. Classroom and laboratory. *NOTE A/See §200.3*

INMS 410 ***Aural Perception: Analytical Hearing II*** (6 credits)
Prerequisite: Integrative Music Studies 310, or written permission of the Department of Music.
An intensive study of selected problems in hearing, analyzing, and transcribing music. The course combines individual and group exercises, with structural analysis. Areas to be covered are determined by specific class needs. *NOTE A/See §200.3*

INMS 421 ***Comparative Analysis II*** (3 credits)
Prerequisite: Integrative Music Studies 320.
Continuation of Integrative Music Studies 320. *NOTE A/See §200.3*

INMS 422 ***Comparative Analysis III*** (3 credits)
Prerequisite: Integrative Music Studies 421.
Continuation of Integrative Music Studies 421. *NOTE A/See §200.3*

INMS 431 ***Instrumentation/Arranging III*** (3 credits)
Prerequisite: Integrative Music Studies 332.
Continuation of Integrative Music Studies 332. *NOTE A/See §200.3*

INMS 432 ***Instrumentation/Arranging IV*** (3 credits)
Prerequisite: Integrative Music Studies 431.
Continuation of Integrative Music Studies 431. *NOTE A/See §200.3*

INMS 440 ***Aural Perception: Analytical Hearing III*** (6 credits)
Prerequisite: Integrative Music Studies 410, or written permission of the Department of Music.
Continuation of Integrative Music Studies 410. *NOTE A/See §200.3*

INMS 471* ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student-designed course of study that focuses on an approved area(s) of music theory, analysis, aural perception, instrumentation, arranging and/or related disciplines, and involves consultation with an adviser. *NOTE C/See §200.3*
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

INMS 472* ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student repeating Integrative Music Studies 471 registers for Integrative Music Studies 472 for credit.
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

INMS 498 ***Special Topics in Music Theory/Aural Perception*** (3 credits)
Prerequisite: Written permission of the Department of Music.
Study in a selected area of harmony, counterpoint, analysis, hearing, instrumentation/orchestration/arranging.

INMS 499 ***Special Topics in Music Theory/Aural Perception*** (6 credits)
Prerequisite: Written permission of the Department of Music.
Study in a selected area of harmony, counterpoint, analysis, hearing, instrumentation/orchestration/arranging.

Music History:

MHIS 200 ***Music History and Society*** (6 credits)
A survey of musical styles in their social context, from pre-history to the present day. While emphasis is on the mainstream of the Western tradition, attention is also given to folk, popular, and jazz styles, as well as to the music of other cultures. *NOTE A/See §200.3*

MHIS 302 ***Music of the Baroque*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
Representative works from the early seventeenth to the mid-eighteenth century. The evolution of "common practice" is traced in the forms, styles, and performance practices of the great masters and schools.

MHIS 303 ***Classical History*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
Representative works from the ages of Haydn, Mozart, and Beethoven. Styles, forms, and performance practices are examined within the context of eighteenth-century social and cultural developments.

MHIS 304 ***Romanticism in Music*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
Representative works from the late eighteenth to early twentieth century. Styles and performance practices are studied as expressions of the romantic consciousness.

MHIS 305 ***Music in the Twentieth Century*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
Selected areas or movements in twentieth-century music. Topics for consideration include the work of major composers, national schools, stylistic schools, and contemporary thought on music.

MHIS 311 ***Medieval Music History*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
The development of basic patterns of Western Music is traced in reference to the historical and cultural forces of the Middle Ages. *NOTE A/See §200.3*

MHIS 312 ***Renaissance Music*** (3 credits)
Prerequisite: Music History 200 and Integrative Music Studies 200 or exemptions.
Musical styles from the mid-fifteenth to the early seventeenth century are examined in the context of the cultural changes which shaped the humanistic age. *NOTE A/See §200.3*

MHIS 314 ***Jazz History*** (3 credits)
Prerequisite: Music History 200 and Integral Music Studies 200 or exemption.
A study in the historical developments and the personalities that contributed to the evolution of jazz styles.

MHIS 471* ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student-designed course of study that focuses on an approved area(s) of music history and/or related disciplines, and involves consultation with an adviser. *NOTE C/See §200.3*
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

MHIS 472* ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student repeating Music History 471 registers for Music History 472 for credit.
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

MHIS 498 ***Special Topics in Music History*** (3 credits)
Prerequisite: Twelve credits in Music and written permission of the Department of Music.
A study of a selected period, area, or contribution. In a given year, the study may examine any significant aspect of Western, non-Western, or other musics. *NOTE C/See §200.3*

Music in Education:

MINE 301 ***Music for Classroom Use I*** (3 credits)
Prerequisite: Enrolment in the Specialization in Early Childhood Education, Major in Child Studies, or written permission of the Department of Music.
This course is designed to give the student a working knowledge of contemporary techniques of group instruction in music. At least one established or experimental method is covered in some depth: for example, Orff, Kodaly, Dalcroze, Martentot, Schafer, Dennis. While the main emphasis is on the cultivation of musicality in the pre-school and elementary school child, the implications for music education in general are also explored. Classroom work includes opportunities for demonstration and practice teaching. *NOTE A/See §200.3*

MINE 302 ***Music for Classroom Use II*** (3 credits)
Prerequisite: Music in Education 301 and written permission of the Department of Music.
A continuation of Music in Education 301. *NOTE A/See §200.3*

MINE 430 ***Studies in Music in Education*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A study of selected problems in music education. *NOTE C/See §200.3*

MINE 431 ***Seminar/Workshop in Music Education I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A study of selected problems in the musical education of the child. Among the areas considered are the music curriculum, music and the other arts, concepts of musicality, musical thinking, the education of the musically gifted child, and the musical environment in home and school. Discussion is combined with workshop demonstrations. *NOTE A/See §200.3*

MINE 432 ***Seminar/Workshop in Music Education II*** (3 credits)
Prerequisite: Music in Education 431.
Continuation of Music in Education 431. *NOTE A/See §200.3*

MINE 440 ***Studies in Music in Education*** (6 credits)
Prerequisite: Music in Education 430.
A student repeating Music in Education 430 registers under Music in Education 440 for credit, provided the subject matter is different.

Music Performance Studies:

NOTE: All students wishing to register for music ensembles, the orchestra, the choir, etc., must contact the Department of Music *at least two weeks prior to their registration date* to arrange an audition.

MPER 200 ***Orchestra I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
Students enrolled in this course participate in the Concordia Orchestra. *NOTE A/See §200.3*

MPER 201 ***Orchestra I J*** (3 credits)
Prerequisite: Written permission of the Department of Music.
Students enrolled in this course participate in the Concordia Orchestra.

MPER 220 ***Choir I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
Students enrolled in this course participate in the Concordia Choir. *NOTE A/See §200.3*

MPER 221 ***Choir I J*** (3 credits)
Prerequisite: Written permission of the Department of Music.
Students enrolled in this course participate in the Concordia Choir. *NOTE A/See §200.3*

MPER 300 ***Orchestra II*** (6 credits)
Prerequisite: Music Performance Studies 200, or 201, and written permission of the Music Department.
Continuation of Music Performance Studies 200 (201). *NOTE A/See §200.3*

MPER 311 ***Early Music Ensemble I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A study, through performance, of representative vocal and instrumental works from the middle ages to the early baroque. *NOTE A/See §200.3*

MPER 312 ***Early Music Ensemble II*** (3 credits)
Prerequisite: Music Performance Studies 311.
Continuation of Music Performance Studies 311. *NOTE A/See §200.3*

MPER 320 ***Choir II*** (6 credits)
Prerequisite: Music Performance Studies 220 or 221 and written permission of the Music Department.
Continuation of Music Performance Studies 220 (221). *NOTE A/See §200.3*

MPER 321 ***Traditional/Contemporary Ensemble I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A study, through performance, of selected works from the traditional and contemporary repertoires. The works studied are determined by class needs and the particular skills of each student. *NOTE A/See §200.3*

MPER 322 ***Traditional/Contemporary Ensemble II*** (3 credits)
Prerequisite: Written permission of the Department of Music.
Continuation of Music Performance Studies 321. *NOTE A/See §200.3*

MPER 330 ***Jazz Improvisation I*** (6 credits)
Prerequisite: Written permission of the Department of Music after audition.
A performance-analysis course that examines the craft of jazz improvisation. A broad spectrum of jazz improvisational styles is examined. Participation in a public recital is required.

MPER 370 ***Musical Performance Skills I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop on specific problems in learning, teaching and developing musical performance skills. Included is the analysis and organization of practice technique, reading, memory, performance practices, style, interpretation, accompaniment and recital preparation. Particular attention is given to the integration of skill with musical understanding. *NOTE A/See §200.3*

MPER 390 ***Advanced Private Study I*** (6 credits)
Prerequisite: Written permission of the Department of Music and enrolment in the Specialization in Music Performance Studies.
This course offers intensive vocal or instrumental instruction for students specializing in performance. A juried examination is required. *NOTE A/See §200.3*
NOTE: Students are required to bear part of the cost of private lessons.

MPER 400 ***Orchestra III*** (6 credits)
Prerequisite: Music Performance Studies 300.
Continuation of Music Performance Studies 300. *NOTE A/See §200.3*

MPER 411 ***Early Music Ensemble III*** (3 credits)
Prerequisite: Music Performance Studies 312.
Continuation of Music Performance Studies 312. *NOTE A/See §200.3*

MPER 412 ***Early Music Ensemble IV*** (3 credits)
Prerequisite: Music Performance Studies 411.
Continuation of Music Performance Studies 411. *NOTE A/See §200.3*

MPER 420 ***Choir III*** (6 credits)
Prerequisite: Music Performance Studies 320.
Continuation of Music Performance Studies 320. *NOTE A/See §200.3*

MPER 421 ***Advanced Repertoire I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
An intensive study of selected works from the repertoire. Particular consideration is given to the acquisition of proficiency in conducting, balance, style, interpretation, and related dimensions of higher technique. *NOTE A/See §200.3*

MPER 422 ***Advanced Repertoire II*** (3 credits)
Prerequisite: Music Performance Studies 421 and written permission of the Department of Music.
Continuation of Music Performance Studies 421. *NOTE A/See §200.3*

MPER 430 ***Jazz Improvisation II*** (6 credits)
Prerequisite: Music Performance Studies 330 and written permission of the Department of Music.
Continuation of Music Performance Studies 330.

MPER 441 ***Performance Practice/Documentation*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A study of historical sources applied directly to performance. Topics covered include ornamentation, improvisation, figured bass, "The Doctrine of the Affections", early notation, and bibliography.

MPER 442 ***Performance Practice/Documentation*** (3 credits)
Prerequisite: Music Performance Studies 441.
A continuation of Music Performance Studies 441.

MPER 470 ***Musical Performance Skills II*** (6 credits)
Prerequisite: Music Performance Studies 370 and written permission of the Department of Music.
Continuation of Music Performance Studies 370. *NOTE A/See §200.3*

MPER 471* ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student-designed course of study that focuses on an approved area(s) of performance practice, performance theory/analysis, pedagogy, and/or related disciplines, and involves consultation with an adviser. When appropriate, the study may include a demonstration/performance. *NOTE C/See §200.3*
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

MPER 472* ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A student repeating Music Performance Studies 471 registers for Music Performance Studies 472 for credit.
**Students may count a maximum of 9 credits in independent studies toward their degree programmes.*

MPER 490 ***Advanced Private Study II*** (6 credits)
Prerequisite: Music 330 or Music Performance Studies 390, enrolment in the Specialization in Music Performance Studies and written permission of the Department of Music.
A continuation of Music Performance Studies 390. An approved public recital may be substituted for the juried examination. *NOTE A/See §200.3*
NOTE: Students are required to bear part of the cost of private lessons.

MPER 498 ***Special Topics in Music Performance*** (3 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop in performance. Selected problems in the development of performance skills. The areas covered are, whenever possible, determined by the specific interests of the students. Topics in any given year may include technique, practice, style, interpretation, accompaniment, ensemble, teaching children, the adult student. *NOTE A,C/See §200.3*

MPER 499 ***Special Topics in Music Performance*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A seminar/workshop in performance. Selected problems in the development of performance skills. The areas covered are, whenever possible, determined by the specific interests of the students. Topics, in any given year, may include technique, practice, style, interpretation, accompaniment, ensemble, teaching children, the adult student. *NOTE A,C/See §200.3*

Music Therapy:

MTRP 300 ***Introduction to Music Therapy*** (6 credits)
Prerequisite: Written permission of the Department of Music.
An overview of theoretical models and their application to a variety of populations. Areas covered include the historical roots of music therapy; methods in client observation, assessment and treatment; techniques of music therapy including instrumental and vocal improvisation, guided imagery in music and the use of songs. When possible, opportunities for observation of music therapy in clinical settings will occur. *NOTE A/See §200.3*

World Music:

WMUS 300 ***Folk Music of the Americas*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A survey of the roots and development of traditional music in the New World. The study examines aboriginal as well as transplanted and hybrid styles; urban and rural musics, with special attention to European and African antecedents; the relationship of folk musics to popular and cultivated styles; transcription and arrangement, ethnomusicological method. *NOTE A/See §200.3*

WMUS 310 ***Music in the Non-Western World*** (6 credits)
Prerequisite: Written permission of the Department of Music.
A survey of the art, religious, and folk music of non-European cultures. The study includes an examination of cross-cultural parallels and influences, instruments, notations, textures, techniques of performance, and problems of interpretation. Illustrated with recordings and slides. *NOTE A/See §200.3*

WMUS 320 ***Folk and Traditional Music I*** (6 credits)
Prerequisite: Written permission of the Department of Music.
The music of a selected culture or community. While in a given year the study may consider the music of any world culture, particular attention is given to the musical heritage of ethnic minorities residing in Canada. *NOTE A/See §200.3*

WMUS 330 ***Folk and Traditional Music II*** (6 credits)
Prerequisite: World Music 320 and written permission of the Department of Music.
Continuation of World Music 320. *NOTE A/See §200.3*

WMUS 340 ***Folk and Traditional Music III*** (6 credits)
Prerequisite: World Music 330 and written permission of the Department of Music.
Continuation of World Music 330. *NOTE A/See §200.3*

81.110 Painting and Drawing

Chair
JEROME KRAUSE, *Associate Professor*

Professors
YVES GAUCHER
GUIDO MOLINARI
ALFRED PINSKY

Associate Professors
MERVIN DEWES
JOHN FOX
RUSSELL GORDON
PATRICK LANDSLEY
JOHN MILLER
LEE PLOTEK
IRENE WHITTOME

Assistant Professors
LYNN HUGHES
DAVID MOORE
MARION WAGSCHAL
CAROL WAINIO

Students are responsible for fulfilling their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.
The superscript indicates credit value.

72 BFA Major in Painting and Drawing

12 Drawing 200^6, 300^6
12 Painting 200^6, 300^6
12 Drawing 420^6, Painting 420^6, Art 420^6
12 Art 261^6*, Art 320^6
6 Drawing 470^6, Painting 470^6, studio arts elective
6 Art History 366^3 and 367^3
6 Studio arts elective selected from outside the Department of Painting and Drawing
6 Art History elective (excluding Art History 267^3, 268^3, 434^6) selected in consultation with an adviser, or Art 460^6

**Art 261 is normally in a triad with special sections of Painting 200 and Drawing 200. All students in the Major are encouraged to complete these courses in their first year, but part-time students unable to take the courses together, as well as students who have already passed or been exempted from Painting 200 and/or Drawing 200 must replace Art 261 with a (non-studio) course approved by the Department of Painting and Drawing.*

60 BFA Major in Studio Art

6 Art 200^6 (or, if exempt, a studio arts elective)
6 Art 261^6*, Art 460^6, Sculpture 465^6 or Art History elective
6 Drawing 200^6
6 Art History electives
24 Studio arts electives**
12 300 and 400 level in a single medium from one of the following departments:
Painting and Drawing
Printmaking and Photography
Sculpture, Ceramics and Fibres

**Art 261 is normally in a triad with special sections of Painting 200 and Drawing 200. All students in the Major are encouraged to complete these courses in their first year, but part-time students unable to take the courses together, as well as students who have already passed or been exempted from Painting 200 and/or Drawing 200 must replace Art 261 with a (non-studio) course approved by the Department of Painting and Drawing.*

***Studio arts courses offered by the Department of Design Art and the Department of Art Education and Art Therapy may be selected as studio arts electives, but these credits do not satisfy the 300- and 400-level sequence requirements.*

60 BFA Major in Art History and Studio Art

6 Art History 280^3, 281^3
6 Art History 267^3, 268^3 or 434^6 or studio arts elective
6 Art 200^6 (or, if exempt, a studio arts elective)
24 Art History electives*
18 Studio arts electives chosen from studio courses offered by Departments of: Design Art; Painting and Drawing; Printmaking and Photography; Sculpture, Ceramics and Fibres

**ART 460 may be substituted for 6 credits in Art History.*

30 Minor in Art History and Studio Art

6 Art History 280^3, 281^3
6 Art 200^6 (or, if exempt, a studio arts elective)
6-12 Art History electives
6-12 Studio arts electives

81.110.1 ADMISSION TO THE MAJOR IN STUDIO ART AND THE MAJOR IN ART HISTORY AND STUDIO ART

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major in Studio Art and the Major in Art History and Studio Art.

All applicants must submit a portfolio as part of the admission process. Accepted applicants who have the

CEGEP 10.6 profile (see §81.10.1) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may request exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works *larger than 20 x 24 inches (50 x 60 centimeters)* and three-dimensional works must be submitted in slide form.
6. Portfolios should include a copy of recent academic record.
7. Portfolios should be presented in a sturdy folder; works should be flat and unframed.
8. Out-of-town applicants may submit photographs and/or slides of their work. Return shipment of out-of-town portfolios is by prior arrangement only.

Applicants submit this portfolio to the Portfolio Committee, Visual Arts Building, Room 237, prior to the deadline of Friday, March 15, 1991. For more detailed information regarding admission to the Major in Studio Art, applicants should contact one of the studio arts departments.

81.110.2 ADMISSION TO THE MAJOR IN PAINTING AND DRAWING

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major in Painting and Drawing.
All applicants must also submit a portfolio—please see §81.110.1, items 1 to 8, for portfolio requirements. Additional requirements for the Major in Painting and Drawing are:

9. Portfolios must be accompanied by a letter of intent explaining the applicant's special interests in painting and drawing.

Applicants must bring both their portfolios and their letters of intent to the Department of Painting and Drawing, Visual arts Building, Room 238, prior to the deadline of Friday, March 15, 1991. For more detailed information regarding admission to the Major in Painting and Drawing, applicants should contact the Department Office.

NOTE: Students are required to bear the cost of materials in studio arts courses.

Art:

ART 200 ***Studio Art I*** (6 credits)
Principles of theory and practice in the visual arts, including explorations in two and three dimensions.

ART 261 ***Aesthetic Inquiry in Visual Arts*** (6 credits)
Prerequisite: Concurrent enrolment in specially designated sections of either Art 200 and Drawing 200 or Drawing 200 and Painting 200.
A seminar addressing the principles and theories relating to the objects and events of visual arts. Topics include the artistic process as expression, intuition, and imagination. Further consideration is given to the products of painting, sculpture; and graphics, emphasizing various contemporary critical and theoretical stances. *NOTE A/See §200.3*

ART 320 ***Studio/Seminar in Painting and Drawing*** (6 credits)
Prerequisite: Drawing 200, Painting 200, Art 261 and enrolment in the Major in Painting and Drawing or written permission of the Department of Painting and Drawing.
A combination studio/seminar in which advanced ideas in painting and drawing are addressed. Special topics of approximately one month duration are presented by guest artists from within and outside the faculty.

ART 417 ***Open Media*** (6 credits)
Prerequisite: 30 credits in studio arts; 400-level studio courses concurrently; or written permission of the Department.
A seminar encompassing an unlimited range and combination of materials.* The varied nature of this approach invites students to provide their own circumstances for creating work. *NOTE A/See §200.3*
**Students are required to bear the cost of materials and, when loan arrangements cannot be made through the Audio-Visual Department, equipment rental.*

ART 420 ***Materials and Methods of the Artist*** (6 credits)
Prerequisite: Drawing 300, Painting 300 and enrolment in the Major in Painting and Drawing or written permission of the Department of Painting and Drawing.
Through a series of special projects in the media of drawing and painting, this course familiarizes the student with some of the historical materials, techniques, and other aspects of the artist's concerns.
NOTE: Students who have credit for Art 234 or Art History 267 or 434 may not take this course for credit.

ART 460 ***Analysis of Great Works of Art*** (6 credits)
A course in art principles. Through the formal analysis of selected masterpieces of painting and sculpture, the student is led to a fuller comprehension of the nature of formal order in the arts. *NOTE A/See §200.3*

Painting:

PTNG 200 ***Painting I*** (6 credits)
Prerequisite: Art 200 or Art 200 exemption.
An exploration of painting, colour, style, image, visual skills, and the technology of painting materials. *NOTE A/See §200.3*

PTNG 300 ***Painting II*** (6 credits)
Prerequisite: Painting 200.
A course in which various media and forms of expression are explored at the more advanced level. *NOTE A/See §200.3*

PTNG 400 ***Painting III*** (6 credits)
Prerequisite: Painting 300.
A continuation of Painting 300. *NOTE A/See §200.3*

PTNG 420 ***Seminar/Workshop in Painting*** (6 credits)
Prerequisite: Art 320 and enrolment in the Major in Painting and Drawing or written permission of the Department of Painting and Drawing.
An advanced studio in painting having its principle emphasis in studio practice, but developing further the theoretical concepts introduced in Art 320. *NOTE A/See §200.3*

PTNG 430 ***Women and Painting*** (6 credits)
Prerequisite: Written permission of the Department of Painting and Drawing.
A studio/seminar course in which students are encouraged to explore their world in painting and consider their practice from the point of view of women's experience, individually and collectively. *NOTE A/See §200.3*

PTNG 440 ***Collage*** (6 credits)
Prerequisite: Written permission of the Department of Painting and Drawing.
An exploration of collage as a means of expression evolving from the historical and artistic traditions of painting and drawing. *NOTE A/See §200.3*

PTNG 450 ***Advanced Studio in Painting*** (6 credits)
Prerequisite: Painting 400.
A continuation of Painting 400. *NOTE A/See §200.3*

PTNG 470 ***Independent Study*** (6 credits)
Prerequisite: Painting 420, previously or concurrently, or written permission of the Department of Painting and Drawing.
A course of independent study in which the advanced student explores a specific area in painting. *NOTE A/See §200.3*

PNTG 498 ***Special Topics in Painting*** (3 credits)
Prerequisite: Third-year standing* and written permission of the Department of Painting and Drawing.
A course for the advanced student which provides an opportunity for the study of more specialized areas in painting. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

PNTG 499 ***Special Topics in Painting*** (6 credits)
Prerequisite: Third-year standing* and written permission of the Department of Painting and Drawing.
A course for advanced students which provides an opportunity for the study of more specialized areas in painting. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

Drawing:

DRAW 200 ***Drawing I*** (6 credits)
Prerequisite: Art 200 or Art 200 exemption or concurrent enrolment in specially designated sections of Art 200 and 261.
An exploration of drawing as a means of expression. Various media are employed to examine and express form, space, figurative, and other graphic images. Drawing from observation, imagination, and memory is included. *NOTE A/See §200.3*

DRAW 300 ***Drawing II*** (6 credits)
Prerequisite: Drawing 200.
A drawing course in which various media and forms of expression are explored at the more advanced level. Lectures and studio periods. *NOTE A/See §200.3*

DRAW 400 ***Drawing III*** (6 credits)
Prerequisite: Drawing 300.
Continuation of Drawing 300. *NOTE A/See §200.3*

DRAW 420 ***Seminar/Workshop in Drawing*** (6 credits)
Prerequisite: Art 320 and enrolment in the Major in Painting and Drawing or written permission of the Department of Painting and Drawing.
An advanced studio in drawing having its principle emphasis in studio practice, but developing further the theoretical concepts introduced in Art 320.

DRAW 450 ***Advanced Studio in Drawing*** (6 credits)
Prerequisite: Drawing 400.
A continuation of Drawing 400.

DRAW 470 ***Independent Study*** (6 credits)
Prerequisite: Drawing 420, previously or concurrently, or written permission of the Department of Painting and Drawing.
A course of independent study in which the advanced student explores a specific area of drawing. *NOTE A/See §200.3*

DRAW 498 ***Special Topics in Drawing*** (3 credits)
Prerequisite: Third-year standing* and written permission of the Department of Painting and Drawing.
A course for advanced students which provides an opportunity for the study of more specialized areas in drawing. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

DRAW 499 ***Special Topics in Drawing*** (6 credits)
Prerequisite: Third-year standing* and written permission of the Department of Painting and Drawing.
A course for advanced students which provides an opportunity for the study of more specialized areas in drawing. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

81.120 Printmaking and Photography

Chair
DENIS JONES, *Associate Professor*

Associate Professors
ROBERT BIGELOW
JUDY KELLY
BARRY WAINWRIGHT

Photography
Co-Chair
GABOR SZILASI, *Associate Professor*

Associate Professors
PENELOPE COUSINEAU
THOMAS GIBSON
KATHERINE TWEEDIE

Assistant Professor
MARK RUWEDEL

Students are responsible for fulfilling their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.
The superscript indicates credit value.

66 BFA Major in Printmaking

12-18 Printmaking 210^6, 220^6, 230^6, 240^6
18-24 Printmaking electives
6 Drawing 200^6 or studio art elective chosen in consultation with an adviser
3 Art History 263^3
3 Art History 349^3 or Art History elective
6 Art History electives*
6 Art 200^6 (or, if exempt, a studio art elective)
6 Studio art elective

**Art 261^6, Art 460^6, Sculpture 465^6 may be substituted for electives in Art History*

Option A permits specialization in two of the three areas of printmaking (intaglio, lithography, or serigraphy).
Option B requires students to follow courses at the 200 level in all three areas of printmaking.

60 BFA Major in Photography

36 Photography 200^6, 250^6, 300^6, 310^6, 320^6, 400^6
6 Photography electives
6 Art History electives
12 Visual Arts electives

60 BFA Major in Studio Art

6 Art 200^6 (or, if exempt, a studio arts elective)
6 Art 261^{6*}, Art 460^6, Sculpture 465^6 or Art History electives
6 Drawing 200^6
6 Art History electives
24 Studio arts electives**
12 300 and 400 level in a single medium from one of the following departments:
Painting and Drawing
Printmaking and Photography
Sculpture, Ceramics and Fibres

**Art 261 is normally in a triad with special sections of Painting 200 and Drawing 200. All students in the Major are encouraged to complete these courses in their first year, but part-time students unable to take the courses together, as well as students who have already passed or been exempted from Painting 200 and/or Drawing 200 must replace Art 261 with a (non-studio) course approved by the Department of Painting and Drawing.*

***Studio arts courses offered by the Department of Design Art and the Department of Art Education and Art Therapy may be selected as studio arts electives, but these credits do not satisfy the 300- and 400-level sequence requirements.*

60 BFA Major in Art History and Studio Art

See Department of Art History (§81.60) or the Department of Painting and Drawing (§81.110).

30 Minor in Photography

12 Photography 200^6, 250^6
12 Photography 300^6, 310^6, 320^6, 330^6, 399^6, 498^3
6 Photography or another visual arts elective

81.120.1 ADMISSION TO PHOTOGRAPHY

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major and Minor in Photography. Applicants must submit a *portfolio* as well as attend an *interview*. The applicants must contact the Department of Printmaking and Photography before Friday, March 15, 1991 for particulars regarding portfolio submissions and interviews.

81.120.2 ADMISSION TO THE MAJOR IN STUDIO ART AND THE MAJOR IN ART HISTORY AND STUDIO ART

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major in Studio Art and the Major in Art History and Studio Art.

All applicants must submit a portfolio as part of the admission process. Accepted applicants who have the *CEGEP 10.6 profile* (see §81.10.1) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may request exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works *larger than 20 x 24 inches (50 x 60 centimeters)* and three-dimensional works must be submitted in slide form.
6. Portfolios should be presented in a sturdy folder; works should be flat and unframed.
7. Out-of-town applicants may submit photographs and/or slides of their work. Return shipment of out-of-town portfolios is by prior arrangement only.

Applicants submit this portfolio to the Portfolio Committee, Visual Arts Building, Room 237, prior to the deadline of Friday, March 15, 1991. For more detailed information regarding admission to the Major in Studio Art, applicants should contact one of the studio arts departments.

81.120.3 ADMISSION TO PRINTMAKING

Applicants to Printmaking may apply to enter directly into the Major in Printmaking or may enter the Major in Studio Art with the intention of transferring upon completion of the first year. In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to Printmaking.

All applicants must also submit a portfolio — please see §81.120.2, items 1 to 7, for portfolio requirements. In addition, for the Major in Printmaking:

8. Portfolios must contain a minimum of 10 works in drawing and/or prints.
9. Portfolios must be submitted to the Department Office before the deadline date of Friday, March 15, 1991, 4:00 p.m.

It is recommended that full-time students in studio arts who plan to apply for transfer to the Major in Printmaking register for 12 credits in printmaking courses in their first 30 credits. Upon completion of the first year (less than 66 credits remaining), students apply for transfer through the Department of Printmaking and Photography. Acceptance into the Major is based on accomplishment and potential in printmaking and on the student's academic performance at Concordia and especially on the portfolio.

NOTE: Students are required to bear the cost of materials in studio arts courses.

Art:

For course descriptions, please see Department of Painting and Drawing, §81.110.

Printmaking:

PRIN 210 ***Intaglio I*** (6 credits)
Prerequisite: Enrolment in the Major in Printmaking or enrolment in a Major or Specialization in a Studio Art Department or Art Education or written permission of the Department of Printmaking and Photography.
A study of the basic principles of traditional and contemporary techniques in intaglio printing, including drypoint, aquatint, hard ground and soft ground etching, black and white and colour processes. *NOTE A/See §200.3*

PRIN 220 ***Lithography I*** (6 credits)
Prerequisite: Enrolment in the Major in Printmaking or enrolment in a Major or Specialization in a Studio Art Department or Art Education or written permission of the Department of Printmaking and Photography.
A study of the basic principles of traditional and contemporary techniques in stone and plate lithography. *NOTE A/See §200.3*

PRIN 230 ***Serigraphy I*** (6 credits)
Prerequisite: Enrolment in the Major in Printmaking or enrolment in a Major or Specialization in a Studio Art Department or Art Education or written permission of the Department of Printmaking and Photography.
A study of the basic principles of screen printing, including direct techniques, photo-screen, and cut film. *NOTE A/See §200.3*

PRIN 240 ***Relief Processes I*** (6 credits)
Prerequisite: Enrolment in the Major in Printmaking or enrolment in a Major or Specialization in a Studio Art Department or Art Education or written permission of the Department of Printmaking and Photography.
A study of the basic principles of traditional and contemporary techniques in relief printing, such as woodcut, linocut, the collograph, black and white and colour processes.

PRIN 310 ***Intaglio II*** (6 credits)
Prerequisite: Printmaking 210.
Continuation of Printmaking 210. *NOTE A/See §200.3*

PRIN 320 ***Lithography II*** (6 credits)
Prerequisite: Printmaking 220.
Continuation of Printmaking 220. *NOTE A/See §200.3*

PRIN 330 ***Serigraphy II*** (6 credits)
Prerequisite: Printmaking 230.
Continuation of Printmaking 230. *NOTE A/See §200.3*

PRIN 340 ***Relief Processes II*** (6 credits)
Prerequisite: Printmaking 240.
Continuation of Printmaking 240.

PRIN 410 ***Intaglio III*** (6 credits)
Prerequisite: Printmaking 310.
Advanced intaglio techniques.

PRIN 420 ***Lithography III*** (6 credits)
Prerequisite: Printmaking 320.
Advanced lithographic techniques.

PRIN 430 ***Serigraphy III*** (6 credits)
Prerequisite: Printmaking 330.
Advanced screen printing.

PRIN 440 ***Relief Processes III*** (6 credits)
Prerequisite: Printmaking 340.
Continuation of Printmaking 340.

PRIN 450 ***The Print in Books, Portfolios and Other Containers*** (6 credits)
Prerequisite: Printmaking 310 or 320 or 330, previously or concurrently, and eighteen credits in studio arts.
The study and application of the print as used in books, portfolios, and other containers. Emphasis is placed on the print image (intaglio, relief, serigraphy and lithography) and its relationship to type layout and book and portfolio design.

PRIN 460 ***The Monoprint*** (6 credits)
Prerequisite: Third-year standing* and written permission of the Department.
A studio course for advanced students which provides an opportunity for further aesthetic investigation using the principles of printmaking.
**fewer than 33 credits remaining in degree programme.*

PRIN 470 ***Independent Study in Printmaking*** (6 credits)
Prerequisite: Third-year standing* and written permission of the Department.
A course of independent study in which the advanced student explores a specific area of printmaking. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

PRIN 498 ***Special Topics in Printmaking*** (3 credits)
Prerequisite: Third-year standing* and written permission of the Department.
A course for advanced students which provides the opportunity for the study of more specialized areas of printmaking. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

PRIN 499 ***Special Topics in Printmaking*** (6 credits)
Prerequisite: Third-year standing* and written permission of the Department.
A course for advanced students which provides the opportunity for the study of more specialized areas of printmaking. *NOTE C/See §200.3*
**fewer than 33 credits remaining in degree programme.*

Photography

PHOT 200 ***Foundations in Photographic Vision: Theory and Practice I*** (6 credits)
Prerequisite: Enrolment in the Major or Minor in Photography or second-year standing* in a Specialization/Major in the Faculty of Fine Arts.**.
An exploration of the aesthetics of photography through the rapid accumulation of images in the field and through the study of contact sheets and prints in the studio. Emphasis is placed upon developing an ability to see photographically. Technical procedures, including optical functions and the camera, photographic chemistry, film and paper processing are taught. *NOTE A/See §200.3*
**fewer than 66 credits remaining in degree programme.*
***Students enrolled in a Specialization/Major in Performing Arts or the Major in Inter-related Arts must obtain written permission of the Department.*
NOTE: Students are required to bear the cost of film stock, processing and printing, and other materials.

PHOT 250 ***Development of Photographic Traditions*** (6 credits)
Prerequisite: Enrolment in the Major or Minor in Photography, or second-year standing* in specialization/major in the Faculty of Fine Arts or written permission of the Department.
A course tracing the development of photography from its earliest appearance to the present. Issues are dealt with historically and thematically and include ideas about photographs as documents, means of social criticism, forms of personal expression, and sequential imagery. Reference is made to the relationship between photographs and other forms of art and to the social or political contexts which influenced its development.
**fewer than 66 credits remaining in degree programme.*

PHOT 300 ***Photographic Vision: Theory and Practice II*** (6 credits)
Prerequisite: Photography 200 and 250 and enrolment in the Major or Minor in Photography, or written permission of the Department.
A studio course directed towards refining darkroom techniques and extending the use of photography as a means of personal expression. Regularly scheduled seminars provide a historical context for contemporary issues. Consideration is given to advanced technical procedures.
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.

PHOT 310 ***Large Format Photography*** (6 credits)
Prerequisite: Second- or third-year standing* in the Major in Photography or written permission of the Department.
A studio course introducing large format photography, its technique and applications. The Zone System method of exposure control is presented as are various historical and contemporary approaches to view-camera work.
**fewer than 66 credits remaining in degree programme.*
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.

PHOT 320 ***Colour*** (6 credits)
Prerequisite: Photography 200 and 250 and enrolment in the Major or Minor in Photography, or written permission of the Department.
A studio course investigating colour photography, its history and its application by contemporary photographers. Students are introduced to the technical procedures for colour printing, to the theory of colour produced by light and the effects of colour balance.
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.

PHOT 330 ***Slide Media*** (6 credits)
Prerequisite: Photography 200 and 250 and written permission of the Department.
An investigation of various methods of combining slides and sound to produce an extended visual statement. The basic techniques of slide and sound production are presented through individual and group projects: storyboards, light sources and filtration, multi-image editing, sound recording, dissolve units, etc. Seminars concerned with the theoretical aspects of these techniques and their uses in contemporary art complement the studio work. *NOTE A/See §200.3*
NOTE: Students are required to bear the cost of film stock, processing, printing and other materials.

PHOT 399 ***Special Topics in Photography*** (6 credits)
Prerequisite: Written permission of the Department.
An opportunity for the study of limited and more specialized aspects of photography. *NOTE C/See §200.3*

PHOT 400 ***Advanced Workshop in Photography*** (6 credits)
Prerequisite: Third-year standing* in the Major in Photography or written permission of the Department.
A studio course in which students pursue one or more extended photographic projects in black and white and/or colour. Topics related to contemporary photography are presented in a seminar fashion.
NOTE: Each student's personal work is evaluated by a jury of Photography Faculty twice during the year.
NOTE: Students are required to bear the cost of film stock, processing, printing, and other materials.
**fewer than 33 credits remaining in degree programme.*

PHOT 470 ***Professional Internship*** (6 credits)
Prerequisite: Second-year standing* in the Major in Photography and written permission of the Department.
A photography student who has been employed in photography for not less than 500 hours within the same calendar year; or similarly, a student employed for the same amount of time in photographic research, archival work, editing a photographic publication or writing photographic criticism, may apply for 6 credits on the understanding that the Department must be satisfied that the work was done under the joint supervision of a qualified professional and a full-time photography faculty member.
**fewer than 66 credits remaining in degree programme.*

PHOT 481 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department.
A course of independent study in which the student explores a specific area of photography.

PHOT 482 ***Independent Study II*** (3 credits)
Prerequisite: Photography 481 and written permission of the Department.
A student repeating Photography 481 registers for credit under Photography 482.

PHOT 498 ***Special Topics in Photography*** (3 credits)
Prerequisite: Written permission of the Department.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of photography.

PHOT 499 ***Special Topics in Photography*** (6 credits)
Prerequisite: Written permission of the Department.
A course for advanced students which provides an opportunity for the study of limited and more specialized aspects of photography.

81.130 Sculpture, Ceramics and Fibres

Chair
WOLFGANG KROL, *Assistant Professor*

Associate Professors
DAVID DORRANCE
KATHRYN LIPKE
NORMA WAGNER

Assistant Professors
ANDREW DUTKEWYCH
TREVOR GOULD
DANICA JOJICH
BARBARA LAYNE

Students are responsible for fulfilling their particular degree requirements; hence, the following sequences must be read in conjunction with §81.20.
The superscript indicates credit value.

60 BFA Major in Ceramics
30 Ceramics 230^6, 330^6, 430^6; Sculpture 465^6; Drawing 200^6
6 Art History 264^3, 350^3
6 Art History electives*
6 Sculpture 200^6; Fibres 240^6, 260^6, 470^6
6 Elective from the Department of Sculpture, Ceramics and Fibres
6 Art 200 or, if exempt, studio arts elective

**With permission of the Department, students may substitute Art 261^6 or Art 460^6 for 6 credits in Art History electives. (It should be noted that Art 261 is part of the foundation core in the Department of Painting and Drawing, and must be taken with Drawing 200, and Art 200 or Painting 200.)*

60 BFA Major in Fibres
18 Fibres 240^6, 260^6; Sculpture 465^6
6 Fibres 340^6 or Fibres 360^6
6 Fibres 480^6
6 Art History 266^3, 352^3
6 Art History electives*
6 Sculpture 200^6; Drawing 200^6; Ceramics 230^6
6 Art 200 or, if exempt, elective from the Department of Sculpture, Ceramics and Fibres
6 Elective from the Department of Sculpture, Ceramics and Fibres

**With permission of the Department, students may substitute Art 261^6, Art 460^6, for 6 credits in Art History elective. (It should be noted that Art 261 is part of the foundation core in the Department of Painting and Drawing, and must be taken with Drawing 200, and Art 200 or Painting 200.)*

60 BFA Major in Sculpture
36 Sculpture 200^6, 300^6, 400^6, 465^6, 490^6; Drawing 200^6
12 Art History electives*
6 Ceramics 230^6; Fibres 240^6, 260^6, 470^6
6 Art 200 or, if exempt, elective from Department of Sculpture, Ceramics and Fibres

**With permission of the Department, students may substitute Art 261^6, Art 460^6, for 6 credits in Art History elective. (It should be noted that Art 261 is part of the foundation core in the Department of Painting and Drawing, and must be taken with Drawing 200, and Art 200 or Painting 200.)*

60 BFA Major in Studio Art
6 Art 200^6 (or, if exempt, a studio arts elective)
6 Art 261^{6*}, Art 460^6, Sculpture 465^6 or Art History electives
6 Drawing 200^6
6 Art History electives
24 Studio arts electives**
12 300 and 400 level in a single medium from one of the following departments:
Painting and Drawing
Printmaking and Photography
Sculpture, Ceramics and Fibres

**Art 261 is normally in a triad with special sections of Painting 200 and Drawing 200. All students in the Major are encouraged to complete these courses in their first year, but part-time students unable to take the courses together, as well as students who have already passed or been exempted from Painting 200 and/or Drawing 200 must replace Art 261 with a (non-studio) course approved by the Department of Painting and Drawing.*

***Studio arts courses offered by the Department of Design Art and the Department of Art Education and Art Therapy may be selected as studio arts electives, but these credits do not satisfy the 300- and 400-level sequence requirements.*

60 BFA Major in Art History and Studio Art
See Department of Art History (§81.60) or the Department of Painting and Drawing (§81.110)

81.130.1 ADMISSION TO THE MAJOR IN STUDIO ART AND THE MAJOR IN ART HISTORY AND STUDIO ART

In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to the Major in Studio Art and the Major in Art History and Studio Art.

All applicants must submit a portfolio as part of the admission process. Accepted applicants who have the

CEGEP 10.6 profile (see §81.10.1) are automatically exempt from Art 200, Studio Art I. Accepted applicants without the 10.6 profile are normally required to complete Art 200. However, they may request exemption if the quality and range of their portfolio submissions are of exceptional merit.

1. Portfolios should consist of a minimum of 20 and maximum of 30 of the applicant's own work.
2. Portfolios should consist of both two-dimensional and three-dimensional work in a variety of mediums.
3. Individual works must be labeled including applicant's name, date, size of work and medium(s) used.
4. Each portfolio must contain a list of contents including all the above information.
5. Works *larger than 20 x 24 inches (50 x 60 centimeters)* and three-dimensional works must be submitted in slide form.
6. Portfolios should be presented in a sturdy folder; works should be flat and unframed.
7. Out-of-town applicants may submit photographs and/or slides of their work. Return shipment of out-of-town portfolios is by prior arrangement only.

Applicants submit this portfolio to the Portfolio Committee, Visual Arts Building, Room 237, prior to the deadline of Friday, March 15, 1991. For more detailed information regarding admission to the Major in Studio Art, applicants should contact one of the studio arts departments.
It is recommended that full-time students, who enter the Major in Studio Art and plan to apply for a transfer of major, register for 18 credits in courses in Ceramics, Fibres and Sculpture in their first 30 credits, these credits to be selected in consultation with an adviser from the Department of Sculpture, Ceramics and Fibres.
Upon completion of the first year, students apply for transfer through the Department of Sculpture, Ceramics and Fibres. Acceptance is based on accomplishment and potential in the area of concentration and the student's academic performance at Concordia.
For more detailed information regarding admission to these programmes, applicants are advised to contact the Department of Sculpture, Ceramics & Fibres.

81.130.2 ADMISSION TO PROGRAMMES IN CERAMICS, FIBRES, SCULPTURE

Applicants to Ceramics, Fibres or Sculpture may apply to enter directly into the Major in Ceramics, the Major in Fibres or the Major in Sculpture or enter the Major in Studio Art with the intention of transferring upon completion of the first year.
In addition to the normal admission procedure of Concordia University, there is a distinct admission procedure for applicants to Ceramics, Fibres and Sculpture.
All applicants must also submit a portfolio — please see §81.130.1, items 1 to 7, for portfolio requirements.
In addition, for the Major in Ceramics, Fibres or Sculpture:

8. Portfolios must consist of approximately 50% three-dimensional work and includes work in the area to which the student is applying.
9. Portfolios must be submitted to the Department Office before the deadline date of Friday, March 15, 1991, 4:00 p.m.

Examples of three-dimensional work should include work in at least two mediums, and should demonstrate creative ability. The two-dimensional work should demonstrate an ability to draw, compose, and use colour imaginatively and creatively.

NOTE: Students are required to bear the cost of materials in studio arts courses.

Art:

For course descriptions, please see Department of Painting and Drawing, §81.110.

Ceramics:

CERA 230 ***Ceramics I*** (6 credits)
Prerequisite: Art 200 or exemption; or Art 200 concurrently with enrolment in either the Major in Ceramics, Major in Fibres, Major in Sculpture or the Major in Studio Art and written permission of the Department of Sculpture, Ceramics and Fibres.
An introduction to clay as an art medium employing the various techniques of forming, shaping and decorating for firing and glazing. *NOTE A/See §200.3*

CERA 330 ***Ceramics II*** (6 credits)
Prerequisite: Ceramics 230.
An advanced course in technical and historical research in various ceramic processes with an emphasis on glazes and the use of different clay bodies. *NOTE A/See §200.3*

CERA 398 ***Special Topics in Ceramics*** (3 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres and third-year standing*.
A workshop/seminar, providing an opportunity for the study of specialized aspects of ceramics. *NOTE C/See §200.3*
**fewer than 33 credits remaining in the degree programme.*

CERA 399 ***Special Topics in Ceramics*** (6 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres.
A workshop-seminar course providing an opportunity for the study of specialized aspects in ceramics. *NOTE C/See §200.3*

CERA 430 ***Ceramics III*** (6 credits)
Prerequisite: Ceramics 330.
The development of a body of personal work and a refinement of specific problems in clay.

CERA 450 ***Independent Study*** (6 credits)
Prerequisite: Written permission of the Department and third-year standing*.
This workshop provides the opportunity for a limited number of students to independently pursue advanced studies in ceramics. *NOTE A/See §200.3*
**fewer than 33 credits remaining in the degree programme.*

Fibres:

FBRS 240 ***Fibre Structures I*** (6 credits)
Prerequisite: Art 200 or exemption; or Art 200 concurrently with enrolment in either the Major in Ceramics, Major in Fibres, Major in Sculpture or the Major in Studio Art and written permission of the Department of Sculpture, Ceramics and Fibres.
An introductory course in which students explore the expressive potential of various materials and processes of fibre structures such as loom weaving, feltmaking, basketry, surface applications and other experimental constructions. *NOTE A/See §200.3*

FBRS 260 ***Printed and Dyed Textile Design I*** (6 credits)
Prerequisite: Art 200 or exemption; or Art 200 concurrently with enrolment in either the Major in Ceramics, Major in Fibres, Major in Sculpture or the Major in Studio Art and written permission of the Department of Sculpture, Ceramics and Fibres.
An introductory course in which students explore the creative potential of printing, painting, dyeing, resist work and construction with fabric. *NOTE A/See §200.3*

FBRS 340 ***Fibre Structures II*** (6 credits)
Prerequisite: Fibres 240.
An intermediate level course which emphasizes the visual and conceptual development of the student in fibre media. Complex woven structures, painting and dyeing, fibre sculpture and other experimental approaches are explored.

FBRS 360 ***Printed and Dyed Textile Design II*** (6 credits)
Prerequisite: Fibres 260.
An intermediate level course in textile printing and dyeing with an emphasis on content. Students investigate traditional and non-traditional approaches such as resist work, discharge and photo processes.

FBRS 398 ***Special Topics in Fibres*** (3 credits)
Prerequisite: Written permission of the Department.
A workshop/seminar course providing an opportunity for study of specialized aspects of fibres. *NOTE C/See §200.3*

FBRS 399 ***Special Topics in Fibres*** (6 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres.
A workshop-seminar course providing an opportunity for the study of specialized aspects in fibres. *NOTE C/See §200.3*

FBRS 450 ***Independent Study*** (6 credits)
Prerequisite: Written permission of the Department and third-year standing*.
This workshop provides the opportunity for a limited number of students to independently pursue advanced studies in Fibres.
**fewer than 33 credits remaining in the degree programme.*

FBRS 470 ***Papermaking*** (6 credits)
Prerequisite: Twenty-four credits in studio art.
The making of paper and its use as a medium of expression. The scope of investigation ranges from surface and image to embossing, casting and three-dimensional construction.

FBRS 480 ***Advanced Fibres*** (6 credits)
Prerequisite: Fibres 340 or Fibres 360.
An advanced level course in which students create a personal body or work, refine technical expertise and develop a visual and critical language related to fibres and textiles. *NOTE A/See §200.3*

Sculpture:

SCUL 200 ***Sculpture I*** (6 credits)
Prerequisite: Art 200 or exemption; or Art 200 concurrently with enrolment in either the Major in Ceramics, Major in Fibres, Major in Sculpture or the Major in Studio Art and written permission of the Department of Sculpture, Ceramics and Fibres.
An investigation into the modes of expression in sculpture through a variety of contemporary and traditional materials and methods including casting, modelling, construction and welding. *NOTE A/See §200.3*

SCUL 300 ***Sculpture II*** (6 credits)
Prerequisite: Sculpture 200.
Investigation into materials and methods emphasizing an individual form of study. The development of concepts and their application, imagination and vocabulary is essential. *NOTE A/See §200.3*

SCUL 398 ***Special Topics in Sculpture*** (3 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres and third-year standing*.
A workshop/seminar course providing an opportunity for the study of specialized aspects of sculpture. *NOTE C/See §200.3*
**fewer than 33 credits remaining in the degree programme.*

SCUL 399 ***Special Topics in Sculpture*** (6 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres.
A workshop-seminar course providing an opportunity for the study of specialized aspects in sculpture. *NOTE C/See §200.3*

SCUL 400 ***Sculpture III*** (6 credits)
Prerequisite: Sculpture 300.
Advanced investigation into a single or group of concepts and materials through the development of a body of personal work. *NOTE A/See §200.3*

SCUL 450 ***Independent Study*** (6 credits)
Prerequisite: Written permission of the Department of Sculpture, Ceramics and Fibres and third-year standing.*
This course provides the opportunity for a limited numbers of students to pursue advanced studies in sculpture. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

SCUL 465 ***Aesthetics of Sculpture*** (6 credits)
Prerequisite: Enrolment in the Major in Sculpture, in Ceramics or in Fibres; or written permission of the Department of Sculpture, Ceramics and Fibres.
A study of selected works emphasizing unique achievements in sculpture; including field trips, studio visits and presentations by visiting artists.

SCUL 490 ***Spatial Relationships*** (6 credits)
Prerequisite: Enrolment in the Major in Sculpture, in Ceramics or in Fibres; or written permission of the Department of Sculpture, Ceramics and Fibres.
A studio course providing an opportunity for the study of specialized aspects of space manipulation as it relates to sculpture.

81.140 Theatre

Chair
GENE GIBBONS, *Associate Professor*

Associate Professors
RALPH ALLISON
NANCY ALLISON-HELMS
GERALD GROSS
BARBARA MACKAY
ERIC MONGERSON
WILLIAM REZNICEK
PHILIP SPENSLEY
BERNARD WARREN

Assistant Professor
PATRICIA FLOOD

Students are responsible for fulfilling their particular degree requirements; hence, the following sequence must be read in conjunction with §81.20.
The superscript indicates credit value.

72 BFA Specialization in Theatre Performance

12 Theatre 240^6, 303^3, 304^3
12 Production 311^3, 312^3, 411^3, 412^3
36 Theatre Performance 211^3, 212^3, 213^3, 215^3, 216^3, 311^3, 312^3, 315^3, 316^3, 323^3, 411^3, 412^3
6 Department of Theatre electives
6 Faculty of Fine Arts electives from any area of the Faculty to be selected in consultation with an adviser

66 BFA Specialization in Design for the Theatre: Conception & Realization

12 Theatre 240^6, 303^3, 304^3
12* Production 311^3, 312^3, 411^3, 412^3
12 Design for the Theatre 250^6, 451^3, 452^3
6 Design for the Theatre 311^3, 321^3, 331^3, 498^3
6 Theatre Design 315^3, 325^3, 326^3, 335^3, 336^3, 337^3, 398^3**
6*** Design for the Theatre electives
6 Art 200^6 or, if exempt, electives from the Faculty of Fine Arts excluding Design for the Theatre offerings, selected in consultation with an adviser
6 Theatre 411^3 and Department of Theatre elective or electives

**With written permission students may substitute Production 408 and/or Production 409 for up to 6 production credits.*

***Students may apply no more than 12 credits from this list of courses to the Specialization in Design for the Theatre.*

****Students who plan to apply for permission to elect Design for the Theatre 414 in their third year should select Theatre 411 in their second year.*

60 BFA Specialization in Drama in Education

12 Drama in Education 200^6, 301^3, 302^3
15 Design for the Theatre 250^6, Theatre 240^6, Theatre 411^3
6 Theatre Performance 201^3 and 202^3 or 211^3, 212^3
6 Theatre Performance electives
3 Production electives
6 Department of Theatre electives
12 Drama in Education 412^3, 413^3, Theatre 303^3 or 304^3 and 3 elective credits from the Department of Theatre
or
12 Drama in Education 420^6, Theatre 303^3, 304^3

The programme, in combination with selected electives from other departments in the university, will prepare students for work in theatre for children; or for community drama work with children or adults in institutional settings such as hospitals, sheltered workshops, and senior citizens homes; or for careers in teaching. In order to qualify as a drama teacher in schools, a diploma year at an accredited institution for teaching certification is required beyond the BFA degree.

The programme is an acceptable prerequisite for graduate work in drama therapy.

60 Joint Specialization in Playwrighting (English and Theatre)*

12 Theatre 240^6, 420^6
3 Theatre Performance 201^3, 211^3
3 Production 311^3**
12 Department of Theatre electives
12 ENGL 227^6, 427^6
12 Electives in drama, chosen from ENGL 235^3, 236^3, 267^6, 277^3, 318^6, 320^6, 335^3, 369^3, 379^3, 392^6. At least 3 credits must be in twentieth-century drama
6 Electives in English Literature or Creative Writing

**This programme is intended for a very few exceptionally talented students each year. Students wishing to enrol in this programme should make an application to either the Major in Theatre (Bachelor of Fine Arts) or the Major in Creative Writing (Department of English, Bachelor of Arts). In either case, in consultation with their advisers, they should select courses which satisfy the requirements for both the Departmental Major and the Joint Specialization. Permission to transfer to the Joint Specialization and to enrol as student playwrights in Theatre 420 (Playwrighting Workshop) is normally granted when students enter their final 30 credits and is based upon successful completion of ENGL 227 (Creative Writing: Drama) and ENGL 427 (Advanced Creative Writing: Drama), review*

of the student's writing to date, and an interview. Students who are refused permission to transfer to the Joint Specialization should expect to complete the requirements for the Departmental Major in which they originally enrolled.

***Students in Playwrighting are given an assignment of an appropriate dimension.*

54 **BFA Major in Theatre**

21 Theatre 240[6], 301[3], 303[3], 304[3], 403[3], 411[3]

6 Design for the Theatre 250[6]

6 Theatre Performance 201[3] and 202[3] or 211[3] and 212[3]

12* Production 311[3], 312[3], 411[3], 412[3]**

9 Electives from the Department of Theatre

**With written permission of the Department of Theatre students may substitute Department of Theatre electives for up to 6 credits in Theatre Production.*

***With written permission of the Department of Theatre students may substitute Production 408 and 409 for up to six required Production credits.*

30 **Minor in Theatre**

6 Theatre 301[3], 303[3], 304[3]

6 Drama in Education, Theatre Performance, and/or Design for the Theatre electives

18 Electives from the Department of Theatre

81.140.1 ADMISSION TO PROGRAMMES IN THEATRE

The Department of Theatre has a distinct admission procedure in addition to the normal admission process of Concordia University. All applicants to Theatre are required to attend an interview as part of the admission process.

Applicants who indicate an interest in Theatre Performance and in Drama in Education are required to audition.

Applicants to the Major in Theatre must submit a letter of intent (approximately 500 words) expressing their goals and interests in the theatre and in the programme. This letter of intent must be received in the Department of Theatre office at least one week prior to the applicant's scheduled interview.

Applicants who indicate an interest in Design for the Theatre must bring to the interview a portfolio of material which demonstrates their creative abilities and interests.

Applicants planning to apply for transfer into the Joint Specialization in Playwrighting must, prior to the interview, submit a portfolio of written material which demonstrates their creative potential.

Applicants are required to contact the Department of Theatre before Friday, March 15, 1991 to arrange their appointments and to obtain detailed information regarding interviews, auditions, portfolios and letters of intent.

Theatre:

THEA 240 ***The Theatre Event*** (6 credits)

The theatre as a cooperative discipline balancing artistic and organizational concerns and requiring analytical and communication skills. Topics of study include play analysis, theatre organization, production planning, stage management and theatre administration. Students work in small groups to create short theatre pieces. One-third of the course is devoted to work in production assignments related to this course. *NOTE A/See §200.3*

THEA 301 ***Canadian Theatre*** (3 credits)

The development of theatre in Canada and the study of selected Canadian plays in text and performance. Topics include amateur and professional theatre, the emergence of theatre programmes in schools and universities, regionalism, the cultural boom of the Sixties and the development of such institutions as festivals, arts councils, and national and local theatre organizations. *NOTE A/See §200.3*

THEA 303 ***Theatre History I*** (3 credits)

A study of the development of the physical stage and representative theoretical and dramatic works within their social context from pre-history to the eighteenth century in Europe. Where appropriate, screenings of plays representing the periods under study are shown. *NOTE A/See §200.3*

THEA 304 ***Theatre History II*** (3 credits)

Prerequisite: THEA 303 or written permission of the Department of Theatre.

A study of the development of the physical stage and representative theoretical and dramatic works within their social context in Europe and North America from the nineteenth century to the present. Where appropriate, screenings of plays representing the periods under study are shown. *NOTE A/See §200.3*

THEA 317 ***Stage Management*** (3 credits)

Prerequisite: Second-year standing* or written permission of the Department of Theatre.

The key role of a stage manager in theatrical production from audition through closing. Topics for consideration include organizational techniques, prompt-book construction and use, scheduling, personnel supervision and the "running" of a show.

**fewer than 66 credits remaining in degree programme.*

THEA 321 ***Theatre Administration I*** (3 credits)

An introduction to theatre administration including theatre organization and management, budgeting, box office operation, publicity and public relations. *NOTE A/See §200.3*

THEA 322 ***Theatre Administration II*** (3 credits)
Prerequisite: Theatre 321 or permission of the Department of Theatre.
A continuation of Theatre 321 with additional topics introduced such as financing, contracting, taxation and touring. *NOTE A/See §200.3*

THEA 401 ***Québec Theatre*** (3 credits)
A study of selected plays of Québec writers within their cultural milieu. Attendance at both French and English language performances is required. Guest speakers involved in Québec theatre are invited to supplement lectures. *NOTE A/See §200.3*
NOTE: Students should have a working knowledge of French.

THEA 402 ***Seminar in Theatre Theory and Criticism*** (3 credits)
Prerequisite: Second-year standing* and written permission of the Department of Theatre.
The examination of theatre theory and concepts of criticism.
**fewer than 66 credits remaining in degree programme.*

THEA 403 ***The Theatre in Context*** (3 credits)
Prerequisite: Third-year standing* in a programme in the Department of Theatre and written permission of the Department of Theatre.
An examination of the role of individual artists in shaping the theatre in contemporary society. The functions and characteristics of the Theatre, in a variety of cultural contexts, are examined in discussions and readings. Emphasis is placed on the Canadian theatre and its potential.
**fewer than 66 credits remaining in degree programme.*

THEA 405 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Credit granted for independent projects supervised by a Faculty member. Students are required to submit a paper based on their investigation. *NOTE C/See §200.3*

THEA 411 ***Directing*** (3 credits)
Prerequisite: Enrolment in the Major in Theatre or the Specialization in Drama in Education or written permission of the Department of Theatre.
Examination of and experimentation in staging and production organization. Exercises in visual, structural and conceptual analysis. *NOTE A/See §200.3*

THEA 415 ***Independent Study II*** (3 credits)
Prerequisite: Theatre 405 and written permission of the Department of Theatre.
Continuation of Theatre 405. Students who have taken Theatre 405 register for Theatre 415 for additional credits.

THEA 420 ***Playwrighting Workshop*** (6 credits)
Prerequisite: Written permission of the Coordinator of the Joint Specialization in Playwrighting and either 12 credits in Theatre Performance or Design for the Theatre or Theatre 411 and Production 311, previously or concurrently; or enrolment in the Joint Specialization in Playwrighting (English and Theatre) and ENGL 427.
A workshop for playwrights, actors, directors and scenographers in which original scripts are developed for possible studio production. *NOTE A/See §200.3*

THEA 498 ***Topics in Theatre Studies*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Topics in theatre which may include genres, periods, individual playwrights and national theatres. *NOTE C/See §200.3*

Design for the Theatre:

DFTT 250 ***Introduction to Design for the Theatre*** (6 credits)
An examination of the theatrical design process. Students attend lectures describing the role of designers in the theatre. They also participate in studies in conception, communication and realization of design ideas. One-third of the course is devoted to work in production assignments related to this course.

DFTT 305 ***Independent Study*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Credit granted for independent projects in Design for the Theatre supervised by a faculty member.

DFTT 311 ***Lighting Design*** (3 credits)
Prerequisite: Art 200 or exemption and Design for the Theatre 250 or written permission of the Department of Theatre.
Lighting design for the theatre with emphasis on conception, development and communication of lighting design ideas. Students participating in lectures and studios examine theories, aesthetics and conventions of stage lighting design. They also carry out projects in lighting design conception.

DFTT 315 ***Lighting Design Realization*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Lighting for the stage with emphasis on analysis, development and execution of lighting design ideas. Students participating in lectures and studios examine lighting as a practical expressive and interpretative media. They carry out projects using stage lighting equipment in an actual theatre space. *NOTE A/See §200.3*

DFTT 321 ***Costume Design*** (3 credits)
Prerequisite: Art 200 or exemption and Design for the Theatre 250 or written permission of the Department of Theatre.
Costume design for the theatre with emphasis on imaginative and analytical processes of developing and communicating costuming design ideas. Students, participating in lectures, studios and projects, examine theories, aesthetics and conventions of stage costume design.

DFTT 325 ***Costume Design Realization*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Materials, equipment, techniques and procedures utilized in the construction of theatre costumes. Emphasis is on patterning, draping and basic construction methods.

DFTT 326 ***Costume Accessories Realization*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Costuming for the stage with emphasis on analysis, development and execution of costume design ideas. Students, participating in lectures and studios, examine materials, equipment, and procedures utilized in the realization of costume accessories. They carry out projects in buckram and frame construction for hats, mask-making and accessory construction. *NOTE A/See §200.3*

DFTT 331 ***Set Design*** (3 credits)
Prerequisite: Art 200 or exemption and Design for the Theatre 250 or written permission of the Department of Theatre.
Set design for the theatre with emphasis on conception, development and communication of scenic design ideas. Students, participating in lectures and studios, examine theories, aesthetics and conventions of set design. They also carry out projects in set conception.

DFTT 335 ***Set Design Realization*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Stage scenery with emphasis on analysis, development and execution of scenic design ideas. Students, participating in lectures and studios, examine the process of translating scenic designs into actual stage systems. They carry out projects using the equipment and material commonly used in set construction.

DFTT 336 ***Stage Properties*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Studio work in the design and construction of properties and accessories for theatre production.

DFTT 337 ***Scene Painting*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Studio work in the materials and technology of painting for the theatre. *NOTE A/See §200.3*

DFTT 398 ***Special Topics in Design for the Theatre*** (3 credits)
Prerequisite: Design for the Theatre 250 or written permission of the Department of Theatre.
Selected topics in design realization. *NOTE C/See §200.3*

DFTT 414 ***Advanced Projects in Design for the Theatre*** (3 credits)
Prerequisite: Third-year standing* in the Specialization in Design for the Theatre and written permission of the Theatre.
Students complete major assignments in design or realization for Department of Theatre productions. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

DFTT 451 ***Designers in the Theatre I*** (3 credits)
Prerequisite: Third-year standing* in the Specialization in Design for the Theatre or written permission of the Department of Theatre.
An advanced study of the role of designers in the contemporary theatre. Students participate in discussions concerning the theories, aesthetics, conventions, and standards of the Canadian theatrical design community. Research is carried out with and about important figures in the Canadian theatre. Students also assemble a body of their design work indicative of their imagination, experiences and understandings of the theatre. *NOTE A/See §200.3*
**fewer than 33 credits remaining in degree programme.*

DFTT 452 ***Designers in the Theatre II*** (3 credits)
Prerequisite: Design for the Theatre 451.
A continuation for Design for the Theatre 451. *NOTE A/See §200.3*

DFTT 498 ***Special Topics in Design for the Theatre*** (3 credits)
Prerequisite: Design for the Theatre 250, Art 200 or written permission of the Department of Theatre.
Selected topics in theatre design. *NOTE C/See §200.3*

Drama in Education:

DINE 200 ***Developmental Drama*** (6 credits)
Prerequisite: Enrolment in the Specialization in Drama in Education or the Specialization in Art Education, or written permission of the Department of Theatre.
Theory and practice of developmental drama. Opportunities are provided for practical work in the creation of original stories and improvised role plays. Discussion of the dynamics, creative processes and teaching methods in primary and secondary school is included. *NOTE A/See §200.3*

DINE 201 ***Drama in Early Childhood Education*** (3 credits)
Prerequisite: Enrolment in the Specialization in Early Childhood Education, or the Major in Child Studies, or written permission of the Department of Theatre.
Focuses on the development of the participants' fluency and flexibility in imaginative expression, on theories about the nature and value of dramatic play, on the implementation of drama curricula for young children. Included are sensory stimulation, imitative role play, make-believe with objects and actions, spontaneous improvisation.

DINE 202 ***Stories for Children*** (3 credits)
Prerequisite: Drama in Education 200, or 201, or 6 credits in Theatre Performance, or written permission of the Department of Theatre.
Focuses on the development of the participants' skills in reading and telling stories, on the creation and evaluation of new stories, on methods of using children's literature as a basis for dramatic play.

DINE 301 ***Drama Experiences for Children*** (3 credits)
Prerequisite: Drama in Education 200 or written permission of the Department of Theatre.
Design and preparation of classroom work in drama for children. Topics may include the creation of environments for story-telling and role playing, and the use of drama to teach other subjects.

DINE 302 ***Drama for Special Populations*** (3 credits)
Prerequisite: Drama in Education 301 or written permission of the Department of Theatre.
Design and preparation of appropriate drama or theatre activities for individuals with special needs in school, community and institutional settings.

DINE 401 ***Supervised Internship—Elementary Level*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Students teach a curriculum unit which uses drama methods in an elementary setting. The students are supervised and their teaching performance is evaluated on selected criteria related to teaching competence and professional behaviour.

DINE 402 ***Supervised Internship—Secondary Level*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Students teach a curriculum unit in creative drama or theatre arts at the secondary level. The students are supervised and their teaching performance is evaluated on selected criteria related to teaching competence and professional behaviour.

DINE 405 ***Independent Study I*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Credit granted for independent projects in Drama in Education supervised by a faculty member.

DINE 412 ***Introduction to Theatre for Young Audiences*** (3 credits)
Prerequisite: Drama in Education 200 or written permission of the Department of Theatre.
The history of theatre for young audiences in the twentieth century, including readings of representative scripts, a study of various performance styles, and an examination of the relationship of style and content to changing cultural views of children. *NOTE A/See §200.3*

DINE 413 ***Theatre for Young Audiences: Production*** (3 credits)
Prerequisite: Enrolment in the Specialization in Drama in Education; or audition and written permission of the Department of Theatre.
Research and practical work in the collaborative process of developing theatre for young audiences. *NOTE A/See §200.3*

DINE 415 ***Independent Study II*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Continuation of DINE 405. Students who have taken DINE 405 register for DINE 415 for additional credits.

DINE 420 ***An Introduction to Drama Therapy*** (6 credits)
Prerequisite: Drama in Education 302 or permission of the Department of Theatre.
Lectures and workshops in which students examine the philosophical and historical foundations of drama and theatre in therapy.

DINE 498 ***Special Topics in Drama in Education*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
The study of specialized aspects of Drama in Education. *NOTE A,C/See §200.3*

Production:

NOTE: Conditions of access to courses and scheduling:
1. All assignments or roles are given after interview or audition.
2. No student may register for more than 6 credits in production courses in any one academic year.
3. Before registering for Production courses, students must make sure they are free to attend all rehearsals or crew calls according to the schedules published each session by the Department of Theatre.

PROD 311 ***Theatre Production I*** (3 credits)
Prerequisite: Theatre 240 and Design for the Theatre 250 or written permission of the Department of Theatre.
Participation in a theatre company composed of members of the Department of Theatre which prepares and presents works of theatre to an audience. The preparation requires the integration of scholarly, creative and organizational activities under the supervision of a team of instructors, all of which must proceed in planned phases according to precise schedules. These activities normally include the following: script analysis with particular concern for dramatic structure, language and its potential for concrete realization; elements of specific concern to the various members of the production team; and studies of the dramatist and of the cultural background of the work including its production history.
Several bills of student-directed projects are given each semester, and the Department generally mounts productions in the University theatres each semester. The types of assignment depend on the students' programmes, their knowledge and skills and the collective needs of the team, and include roles in all aspects of theatre production.
In addition to their work directly related to their particular assignment on one or more productions, students attend company colloquia during which the production teams explain their approaches and demonstrate their projects. *NOTE A/See §200.3*

PROD 312 ***Theatre Production II*** (3 credits)
Prerequisite: Production 311 or written permission of the Department of Theatre.
A continuation of Production 311 with assignments of a different type or level of complexity, or demanding a higher degree of proficiency.

PROD 408 ***Supervised Internship I*** (3 credits)
Prerequisite: Second-year standing* in a programme of the Department of Theatre and written permission of the Department of Theatre.
An opportunity for students to obtain credit for work completed for a recognized theatre under the joint supervision of a qualified professional and a full-time Theatre faculty member. *NOTE C/See §200.3*
**fewer than 66 credits remaining in degree programme.*

PROD 409 ***Supervised Internship II*** (3 credits)
Prerequisite: Production 408 and written permission of the Department of Theatre.
A continuation of Production 408. A student repeating Production 408 register for Production 409 for credit.

PROD 411 ***Theatre Production III*** (3 credits)
Prerequisite: Production 312 or written permission of the Department of Theatre.
A continuation of Production 312. Advanced assignments in the various areas of theatre work. Students are expected to report on the results of their work in forms appropriate to their assignments.

PROD 412 ***Theatre Production IV*** (3 credits)
Prerequisite: Production 411 or written permission of the Department of Theatre.
A continuation of Production 411 with assignments of a different type or level of complexity, or demanding a higher degree of proficiency.

PROD 413 ***Theatre Production V*** (3 credits)
Prerequisite: Production 412 or written permission of the Department of Theatre.
Students in a Mature Level or an Extended Credit programme repeating Production 412 register for credit under Production 413.

PROD 414 ***Theatre Production VI*** (3 credits)
Prerequisite: Production 413 or written permission of the Department of Theatre.
Students in a Mature Level or an Extended Credit programme repeating Production 413 register for credit under Production 414.

Theatre Performance:

TPER 201 ***Acting I*** (3 credits)
Emphasis on developing imagination and physical expression, including basics of improvisation, the playing of intention, and the group ensemble experience working toward presentation. *NOTE A/See §200.3*

TPER 202 ***Acting II*** (3 credits)
Prerequisite: Theatre Performance 201 or written permission of the Department of Theatre.
Preparation for the role, including script and character analysis, and the continued development of imagination and expression. The group analyzes and rehearses scripts for presentation. *NOTE A/See §200.3*

TPER 211 ***Ensemble I*** (3 credits)
Prerequisite: Enrolment in the Specialization in Theatre Performance or written permission of the Department of Theatre.
The elements of preparation for theatrical presentation with emphasis on the cooperative nature of theatre. Studio work includes instruction in sensory awareness, performer-audience relationships, spatial relationships and improvisational techniques. The laboratory component consists of preparation of material studied during the studio sessions.

TPER 212 ***Ensemble II*** (3 credits)
Prerequisite: Theatre Performance 211 and enrolment in a programme in the Department of Theatre.
A continuation of Theatre Performance 211 with increased emphasis on language and text.

TPER 213 ***Theatre Movement I*** (3 credits)
Prerequisite: Theatre Performance 211 concurrently.
Movement for the stage includes such areas of study as centering, relaxation, mime, neutral mask, and studies in rhythm and timing.

TPER 215 ***Voice Studio I*** (3 credits)
Prerequisite: Theatre Performance 211 concurrently and written permission of the Department of Theatre.
An introduction to voice, speech and singing skills. Vocal production, articulation, phrasing, and language analysis are taught in studio and laboratory sessions. Private tutorials dealing with selected skills in voice and speech for the performer are included.*NOTE A/See §200.3*
NOTE: Students are expected to bear certain costs in relation to this course.

TPER 216 ***Voice Studio II*** (3 credits)
Prerequisite: Theatre Performance 215, and Theatre Performance 212 concurrently.
A continuation of Theatre Performance 215.
NOTE: Students are expected to bear certain costs in relation to this course.

TPER 223 ***Fundamentals of Voice, Speech and Movement I*** (3 credits)
Prerequisite: Enrolment in the Major or Minor in Theatre, the Specialization in Drama in Education, or written permission of the Department of Theatre.
Development of the actor's instrument through the integration of body movement and voice. Emphasis is on movement, comprising exercises for vocal and physical flexibility, relief from tension, the expressive use of gesture and body composition, vocal support and speech mechanics.

TPER 224 ***Fundamentals of Voice, Speech and Movement II*** (3 credits)
Prerequisite: Theatre Performance 223.
A continuation of Theatre Performance 223, with increased emphasis on speech processes.

TPER 306 ***Acting III*** (3 credits)
Prerequisite: Theatre Performance 202, 212 or 223.
An in-depth study of the development of character within the context of the play. Script analysis, interpretation, and physical/vocal characterization are included. Students are required to present scenes from selected plays.

TPER 307 ***Acting IV*** (3 credits)
Prerequisite: Theatre Performance 306.
Continuation of character study, moving towards the examination of non-realistic performance styles. The presentation of scenes from selected plays is required.

TPER 311 ***Ensemble III*** (3 credits)
Prerequisite: Theatre Performance 202 or 212 and written permission of the Department of Theatre.
A continuation of Theatre Performance 212 with emphasis on principles of characterization in various dramatic genre: elements of rhythm, physical and vocal attitude, language, related improvisation techniques.

TPER 312 ***Ensemble IV*** (3 credits)
Prerequisite: Theatre Performance 306 or 311 and written permision of the Department of Theatre.
A continuation of Theatre Performance 311.

TPER 315 ***Voice Studio III*** (3 credits)
Prerequisite: Theatre Performance 216, concurrent enrolment in Theatre Performance 311 and written permission of the Department of Theatre.
A continuation of Theatre Performance 216 with greater emphasis on shaping patterns of speech, use of language for character development and an introduction of dialects and accents. Private tutorial dealing with specific elements of speech and voice for the performer is included.
NOTE: Students are expected to bear certain costs for this course.

TPER 316 ***Voice Studio IV*** (3 credits)
Prerequisite: Theatre Performance 315 and concurrent enrolment in Theatre Performance 312.
A continuation of Theatre Performance 315.
NOTE: Students are expected to bear certain costs for this course.

TPER 323 ***Theatre Movement II*** (3 credits)
Prerequisite: Theatre Performance 213 or written permission of the Department of Theatre.
A continuation of Theatre Performance 213.

TPER 411 ***Ensemble V*** (3 credits)
Prerequisite: Theatre Performance 312, 323 or written permission of the Department of Theatre.
A continuation of Theatre Performance 312. Focuses on acting styles as they relate to audience-performer relationships in dramatic genre and periods.

TPER 412 ***Ensemble VI*** (3 credits)
Prerequisite: Theatre Performance 411 or written permission of the Department of Theatre.
A continuation of Theatre Performance 411.

TPER 413 ***Advanced Performance Studies I*** (3 credits)
Prerequisite: Theatre Performance 323 or written permission of the Department of Theatre.
The study of special performance techniques such as: musical theatre, clown, *Commedia dell'Arte*, and mime. *NOTE A/See §200.3*
NOTE: Students are expected to bear certain costs in relation to this course.

TPER 414 ***Advanced Performance Studies II*** (3 credits)
Prerequisite: Theatre Performance 316 or written permission of the Department of Theatre.
The study of advanced voice and speech techniques.
NOTE: Students are expected to bear certain costs in relation to this course.

TPER 417 ***Audition and Resumé Preparation*** (3 credits)
Prerequisite: Third-year standing* in the Specialization in Theatre Performance or in a Department of Theatre programme with written permission of the Department of Theatre.
Techniques for auditioning, preparation of resumé and the business aspects of the performer's work in the professional theatre.
**fewer than 33 credits remaining in degree programme.*

TPER 498 ***Special Topics in Theatre Performance*** (3 credits)
Prerequisite: Written permission of the Department of Theatre.
Provides opportunities for studies in selected styles or modes of theatre performance. *NOTE C/See §200.3*

SECTION 100

FACULTY

FULL TIME

ABLENAS, F., PhD *Tor., Assistant Professor of Chemistry and Biochemistry*
ABRAMI, P., PhD *Manit., Professor of Education*
ACHESON, P., PhD *Indiana, Associate Professor, TESL (Applied Linguistics)*
ACLAND, C.D., PhD *N. Carolina, CA, Professor of Accountancy*
ADAMS, F.G.W., PhD *Chic., Associate Professor of History*
ADAMS, L., BMus *Boston, Associate Professor of Music*
ADAMSON, A.H., PhD *Lond., Professor of History*
ADLER, L.S., SM *M.I.T., Associate Professor of Mathematics and Statistics*
ADLEY, T.J., PhD *Lond., Associate Professor of Chemistry and Biochemistry*
AHMAD, A., MBA *McG., Lecturer in Finance*
AHMAD, J., PhD *M.I.T., Professor of Economics*
AHMAD, M.M., PhD *Chic., Associate Professor of Philosophy*
AHMAD, M.O., DEng *C'dia., Associate Professor of Electrical and Computer Engineering*
AHSAN, S.M., PhD *McM., Professor of Economics*
AIKEN, S.R., PhD *Penn. State, Associate Professor of Geography*
ALAGAR, V.S., PhD *McG., Professor of Computer Science*
ALBERT, P.J., PhD *New Br., Associate Professor of Biology*
ALI, S.T., PhD *Roch., Associate Professor of Mathematics and Statistics*
ALKASS, S.T., PhD *Lough., Assistant Professor, Centre for Building Studies*
AL-KHALILI, A.J., PhD *Strath., Associate Professor of Electrical and Computer Engineering*
ALLEN, Sr. P., A.S.M., PhD *Claremont, Calif., Associate Professor of Philosophy*
ALLEN, R., MA *Cornell, Associate Professor of English*
ALLISON, R.R., PhD *Flor. State, Associate Professor of Theatre*
ALLISON-HELMS, N., MA *Calif., Associate Professor of Theatre*
ALLOR, M., PhD *Illinois, Associate Professor of Communication Studies*
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ALY, I.M., PhD *N. Texas State, Assistant Professor of Accountancy*
AMIR, S., PhD *McG., Associate Professor of Psychology*
AMIT, Z., PhD *McG., Professor of Psychology*
ANAND, K.K., PhD *N.Y., Associate Professor of Mathematics and Statistics*
ANASTASIU, S., DipGraph *Inst. d'arts plastiques, Bucarest, Assistant Professor of Cinema*
ANASTASOPOULOS, A., PhD *Roch., Associate Professor of Economics*
ANDERSON, J.M., PhD *Madison, Wis., Assistant Professor of Geography*
ANDERSON, P.D., PhD *Ore. State, Associate Professor of Biology*
ANDRES, D.H., PhD *Wat., Associate Professor of Psychology*
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ANVARI, M., PhD *Case Western Res., Professor of Finance*
APPELBAUM, S., PhD *Ott., Professor of Management*
APRIL, R., *Lecturer in Printmaking and Photography*
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ARNOPOULOS, S., MA *C'dia., Sessional Lecturer in Journalism*
ASHFORTH, B.E., PhD *Tor., Assistant Professor of Management*
ASHTAKALA, B., PhD *Wat., Associate Professor of Civil Engineering*
ASHTAKALA, S.S., PhD *Tor., Associate Professor of Biology*
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BABA, V.V., PhD *Br. Col., Associate Professor of Management*
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BARTON, C.R., PhD *N.Y., Associate Professor of Linguistics*
BAUER, J.H., PhD *Manit., Associate Professor of Psychology*
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BEDARD, C., PhD *Imperial Coll., U.K., Assistant Professor, Centre for Building Studies*
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BELINSKY, M.M., PhD *Montr., Associate Professor of Mathematics and Statistics*
BELISLE, J., PhD *Paris, Associate Professor of Art History*
BELKIN, R., PhD *Montr., Professor of English*
BELMORE, N., PhD *Georgetown, Professor, TESL (Applied Linguistics)*
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BERLAND, J., PhD *York (Can.), Assistant Professor of Communication Studies*
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BERNIER, L., PhD *Northwestern, Assistant Professor of Political Science*
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BEYROUTI, P., MBA *C'dia., Sessional Lecturer in Decision Sciences and Management Information Systems*
BHAT, R.B., PhD *I.I.T., Professor of Mechanical Engineering*
BHATNAGAR, J.K., PhD *Lond., Professor of Education*
BHATTACHARYYA, B.B., PhD *N.S.T.C., Professor of Electrical and Computer Engineering*
BIGELOW, R., BFA *Choinard Art Inst., Associate Professor of Printmaking and Photography*
BIRD, F.B., PhD *G.T.U. (Berkeley), Professor of Religion*
BIRD, P.H., PhD *Sheff., Professor of Chemistry and Biochemistry*
BLACH, A.E., PhD *Montr.,* Ing, *Associate Professor of Mechanical Engineering*
BLACH, W., MEng *Swiss Inst. of Tech., Lecturer in Mechanical Engineering*
BLOCK, S., MA *C'dia., Lecturer in School of Community and Public Affairs*
BLYTHE, D., *Associate Professor of Theatre*
BOBETIC, M.V., PhD *Wat., Associate Professor of Mathematics and Statistics*
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BOLTON, C., PhD *McM., Lecturer in Classics*
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BOTTENBERG, W., DMA *Cinc., Associate Professor of Music*
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BRETON, G., PhD *Mich., Associate Professor of Psychology*
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BRIAN, M.A., MA *Bryn-Mawr, Associate Professor of Mathematics and Statistics*
BRODT, A., PhD *N.Y.U., Associate Professor of Finance*
BRODY, J., PhD *Czech., Associate Professor of Mathematics and Statistics*
BROES, A., PhD *Pitt., Associate Professor of English*
BROSS, M., PhD *Manit., Associate Professor of Psychology*
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BROWN, J., MEd *Kent State, Assistant Professor of Music*
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BUKOWSKI, W., PhD *Mich., Associate Professor of Psychology*
BULGAK, A., PhD *Wis., Assistant Professor of Mechanical Engineering*
BUTOVSKY, M., MA *McG., Professor of English*
BUXTON, W., PhD *Berlin, Associate Professor of Communication Studies*
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DAVIES, S., PhD *McM., Assistant Professor of History*
DAVIS, C.A., STL *Greg., Rome, Professor of Religion*
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DEVINE, I., PhD *Case Western Res., Assistant Professor of Management*
DEVINE, M., MFA *York, Assistant Professor of Theatre*
de VRIES, P.J., PhD *Alta., Associate Professor of Anthropology*
DEWES, M., DipDesign Research *St. Martins Sch. of Art, Lond., Associate Professor of Painting and Drawing*
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DHAWAN, K.C., PhD *N.Y., Associate Professor of Marketing, and International Business*
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DI MICHELE, M., MA *Windsor, Assistant Professor of English*
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DONNER, W., PhD *Tor., Assistant Professor of Philosophy*
DOREEN, D.D., PhD *Alabama, Associate Professor of Decision Sciences and Management Information Systems*
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DOYLE, A.B., PhD *Stan., Professor of Psychology*
DRAIMIN, C., PhD *C'dia.*, CA, *Assistant Professor of Accountancy*
DRYSDALE, J.P., PhD *Louisiana State, Associate Professor of Sociology*
DUBAS, Rev. M.S., s.j., PhD *St. Louis, Associate Professor of Physics*
DUBNEY, L., MA *Goddard, Vt., Lecturer in Applied Social Science*
DUBREUIL, B., DEA *Paris, Visiting Associate Professor of Education*
DUTKEWYCH, A., BFA *Philadelphia Coll. of Art, Assistant Professor of Sculpture, Ceramics and Fibres*
DWIVEDI, T.D., PhD *Ott., Professor of Mathematics and Statistics*
DYER, L., PhD *Carnegie-Mellon, Associate Professor of Management*

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EASTHAM, S., PhD *Calif., Assistant Professor of Communication Studies*
EDDY, N.W., PhD *Arizona, Associate Professor of Physics*
EGAN, E., PhD *Fordham, Associate Professor of Philosophy*
ELALI, W., PhD *Belgrade, Sessional Lecturer in Finance*
EL-DIASTY, R., PhD *C'dia., Associate Professor, Centre for Building Studies*
ELHAKEEM, A.K., PhD *S.M.U., Dallas, Associate Professor of Electrical and Computer Engineering*
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ELLISON, W.C., MA *Indiana, Associate Professor of Music*
ENESCO, H.E., PhD *Col., Professor of Biology*
ENGLISH, A.M., PhD *McG., Associate Professor of Chemistry and Biochemistry*
ENGLISH, G.B., MComm *Tor., Associate Professor of Finance*
ENOS, E.F., EdD *Boston, Associate Professor of Exercise Science*
ENTWISTLE, H., PhD *Lond., Professor of Education*
ERLWANGER, S.H., PhD *Illinois, Associate Professor of Mathematics and Statistics*
ETEZADI-AMOLI, J., PhD *Tor., Assistant Professor of Decision Sciences and Management Information Systems*

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FALSETTO, M., MA *N.Y.U., Associate Professor of Cinema*
FAMIRA, H., PhD *McG., Associate Professor of Modern Languages (German)*
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FAZIO, P., PhD *Windsor*, Ing, *Professor, Centre for Building Studies*
FELDMAN, D., PhD *Polytech. Inst., Romania, Professor, Centre for Building Studies*
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FORD, D., PhD *Ohio State, Assistant Professor of Computer Science*
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FOSTER, M.B., MA *Minn., Professor of English*
FOX, J., Dip *Slade Sch. of Fine Art, Lond., Associate Professor of Painting and Drawing*
FRANK, B., PhD *Br. Col., Professor of Physics*
FRANK, M., PhD *Johns H., Assistant Professor of Liberal Arts College*
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GALLER, A.M., MS *Simmons Coll., Associate Professor of Library Studies*
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GEDDES, G., PhD *Tor., Professor of English*
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GOLD, D., PhD *Sask., Professor of Psychology*
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GOLDSMITH, B., *Assistant Professor of Social Aspects Engineering*
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GOYAL, S.K., MSc *Strath., Professor of Decision Sciences and Management Information Systems*
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GRAM, H.A., PhD *Syr., Associate Professor of Management*
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GRAY, T., PhD *S. Fraser, Associate Professor of Psychology*
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GREENBERG, R., MA *Tor., Associate Professor of Art History*
GREENE, D.F., PhD *Calg., Lecturer in Geography*
GROENING, L., PhD *Car., Assistant Professor of English*
GROGONO, P., PhD *C'dia., Assistant Professor of Computer Science*
GROSS, G., MA *Montr., Associate Professor of Theatre*
GROSSMAN, J., PhD *Tor., Sessional Lecturer in Management*
GUINDON, H., MA *Ott., Professor of Sociology*
GULICK, P., PhD *Calif., Assistant Professor of Biology*
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HA, H.K., DEng *Sir G. Wms., Associate Professor, Centre for Building Studies*
HABASHI, W.G., PhD *Cornell, Professor of Mechanical Engineering*
HABIB, H.P., PhD *McG., Professor of Political Science*
HALL, R.L., PhD *Lond., Professor of Mathematics and Statistics*
HAMALIAN, A., MA *Wis., Associate Professor of Education*
HAMBLIN, F.D., MSc *Durh.,* PEng, *Associate Professor of Engineering*
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HAMLET, Z., PhD *Notre Dame, Associate Professor of Chemistry and Biochemistry*
HANCOX, R., MFA *Ohio, Associate Professor of Communication Studies*
HANNA, A.M., PhD *Tech. U. of N.S., Associate Professor of Civil Engineering*
HARGADON, R., BA *Car., Sessional Lecturer in Commerce and Administration*
HARNAD, J., DPhil *Oxf., Professor of Mathematics and Statistics*
HAROUN, B., *Lecturer in Electrical and Computer Engineering*
HART, L., PhD *Chic., Associate Professor of Sculpture, Ceramics and Fibres*
HAYES, F., PhD *McG., Professor of Economics*
HAYES, J.C., MSc *McG., Associate Professor of Mathematics and Statistics*
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SHANKER, L., PhD *Flor., Associate Professor of Finance*
SHAPIRO, B., MSSc *Bryn Mawr, Sessional Lecturer in Management*
SHAPIRO, D., PhD *Cornell, Associate Professor of Economics*
SHARMA, D.K., PhD *Ban., Associate Professor of Chemistry and Biochemistry*
SHARMA, M., MBA *McG., Lecturer in Decision Sciences and Management Information Systems*
SHARMA, R.C., PhD *Tor., Associate Professor of Physics*
SHARMA, V.A., PhD *N. Iowa, Assistant Professor, TESL (Applied Linguistics)*
SHARP, M., MCL *McG., Sessional Lecturer in Management*
SHAW, S., PhD *C'dia., Assistant Professor of Education*

SHEETS-PYENSON, S., PhD *Penn., Associate Professor of Geography*
SHEININ, R., PhD *Tor., DSc Acad., DHumLett Mt. St. Vin., Professor of Biology*
SHEPS, G.D., MA *Cornell, Associate Professor of English*
SHERMAN, L., MA *N.Y., Professor of Art Education and Art Therapy*
SHIN, J., MSc *Cornell, Associate Professor of Physics*
SHINAR, D., PhD *Hebrew U., Israel, Professor of Communication Studies*
SHINGHAL, R., PhD *McG., Associate Professor of Computer Science*
SHIZGAL, P., PhD *Penn., Professor of Psychology*
SHLOSSER, F.E., PhD *McG., Associate Professor of History*
SHORT, G., MPE *Windsor, Lecturer in Exercise Science*
SHULMAN, H., MA *Car., Associate Professor of Political Science*
SIGGEL, E., PhD *Tor., Associate Professor of Economics*
SIMON, P., PhD *Montr., Professor of Education*
SIMON, S., PhD *McG., Assistant Professor of Études françaises*
SIMON, W., *Lecturer in Printmaking and Photography*
SIMPKINS, H.J., MBA *C'dia., Sessional Lecturer in Marketing*
SIMS, W.A., PhD *Tor., Associate Professor of Economics*
SIMYAR, F., PhD *S. Calif.*, CPA/CGA, *Professor of Accountancy*
SINGER, M., PhD *Mich., Associate Professor of History*
SINGH, L.P., PhD *Delhi* PhD *A.N.U., Professor of Political Science*
SINYOR, D., PhD *C'dia., Assistant Professor of Psychology*
SIVARAMAN, K., PhD *Ban., Professor of Religion*
SLACK, B., PhD *McG., Professor of Geography*
SMITH, B.M., PhD *Laval, Associate Professor, TESL (Applied Linguistics)*
SMITH, I.H., PhD *McG., Associate Professor of History*
SMITH, R.A., PhD *McG., Associate Professor of Education*
SMUCKER, J., PhD *Mich. State, Professor of Sociology*
SOLAS, R.C., PhD *Marmara U., Istanbul, Visiting Associate Professor of Accountancy*
SOMMER, R.J., PhD *Harv., Associate Professor of English*
SORFLEET, J.R., PhD *New Br., Associate Professor of English*
SORIC, J., MSc *McM., Associate Professor of Mathematics and Statistics*
SOVIC, N.C., MBA *S. Calif., Assistant Professor of Management*
SPENSLEY, P., PhD *Wayne State, Associate Professor of Theatre*
SPICER, M., PhD *Ott. PhD(Th) Coll. Dom., Associate Professor of Theological Studies*
SRIVASTAVA, T., PhD *Gorak., Associate Professor of Mathematics and Statistics*
STACK, D.M., PhD *Qu., Assistant Professor of Psychology*
STAPE, J.H., PhD *Tor., Assistant Professor of English*
STAPLETON, J., MA *Qu., Assistant Professor of Economics*
STATHOPOULOS, T., PhD *W. Ont.*, PEng, *Professor, Centre for Building Studies*
STELCNER, M., PhD *Syr., Associate Professor of Economics*
STERN, M., MBA *Pace U., Executive-in-Residence, Accountancy*
STERN, R.J., PhD *Northwestern, Professor of Mathematics and Statistics*
STEVENS, F., PhD *U. de Genève, Associate Professor of Education*
STEWART, J., PhD *Lond., Professor of Psychology*
STORMS, R.K., PhD *Alta., Associate Professor of Biology*
SUEN, C.Y., PhD *Br. Col., Professor of Computer Science*
SUGDEN, L., Dd'U *Nice, Associate Professor of Études françaises*
SULLIVAN, S.J., PhD *Wat., Associate Professor of Exercise Science*
SVOBODA, J.V., DEng *C'dia., Associate Professor of Mechanical Engineering*
SWAMY, M.M., *Lecturer in Electrical and Computer Engineering*
SWAMY, M.N.S., PhD *Sask.*, Ing, *Professor of Electrical and Computer Engineering*
SWEDBURG, R.B., EdD *Idaho, Associate Professor of Leisure Studies*
SWITZER, L., PhD *Penn., Associate Professor of Finance*
SYNNOTT, A.J., PhD *Lond., Associate Professor of Sociology*
SZABO, M.E., PhD *McG., Professor of Mathematics and Statistics*
SZILASI, G., *Associate Professor of Printmaking and Photography*

TADDEO, D.J., PhD *Stan., Associate Professor of Communication Studies*
TAGGART, G.C., PhD *Montr., Professor of Études françaises*
TAKAHASHI, A., PhD *Pitt., Associate Professor of Economics*
TALAI, V.A., PhD *Manc., Assistant Professor of Sociology and Anthropology*
TAO, L., PhD *Penn. State, Assistant Professor of Computer Science*
TASCONE, J.F., MA *St. Bonaventure, Associate Professor of Sociology*
TAYLOR, M., PhD *Tor., Associate Professor of Applied Social Science*
TAYLOR, N.D., PhD *McG., Associate Professor of Psychology*
TAYLOR, W.D., PhD *H.E.C., Montr., Associate Professor of Management*
TEE, O.S., PhD *E. Anglia, Professor of Chemistry and Biochemistry*
TEFFETELLER, A., PhD *McG., Assistant Professor of Modern Languages (Linguistics)*
TEMPLE-RASTON, M., PhD *Camb., Assistant Professor of Mathematics and Statistics*
TERRY, D., BA *Nfld., Lecturer in Cinema*
THORNTON, P.A., PhD *Aberd., Associate Professor of Geography*
THULASIRAMAN, K., PhD *I.I.T. Madras, Professor of Electrical and Computer Engineering*
THWAITES, H., BA *Loy. (Montr.), Assistant Professor of Communication Studies*
TICOLL, G., MA *McG., Sessional Lecturer in Decision Sciences and Management Information Systems*
TIFFOU, M., DES *Montr., Associate Professor of Études françaises*

TITTLER, R., PhD *N.Y., Professor of History*
TOMBERLIN, T.J., PhD *Harv., Associate Professor of Decision Sciences and Management Information Systems*
TOVAR, M., PhD *Indiana, Assistant Professor of Education*
TRAINOR, T., MBA *C'dia., Sessional Lecturer in Finance*
TREMBLAY, R., PhD *Chic., Lecturer in Political Science*
TRESIERRA, J., PhD *Notre Dame, Associate Professor of Sociology*
TROITSKY, M.S., DTechSc *Belgrade,* Ing, *Professor of Civil Engineering*
TRUCHON, P.N., MA *McG., Associate Professor of Études françaises*
TRUDEL, G.J., PhD *Leeds, Associate Professor of Chemistry and Biochemistry*
TRUEMAN, C.W., PhD *McG., Associate Professor of Electrical and Computer Engineering*
TURGEON, J.C., PhD *Col., Associate Professor of Mathematics and Statistics*
TWEEDIE, K., BA *McG., Associate Professor of Printmaking and Photography*

UDY, J.M., PhD *C'dia., Assistant Professor of Geography, and Urban Studies*
UPSHUR, J.A., PhD *Mich., Professor, TESL (Applied Linguistics)*

VALASKAKIS, G., PhD *McG., Professor of Communication Studies*
VAN NUS, W., PhD *Tor., Associate Professor of History*
VARGA, D., MA *Tor., Assistant Professor of Education*
VASIL, A., BComm *McG.,* CA, *Assistant Professor of Accountancy*
VATISTAS, G.H., PhD *C'dia., Associate Professor of Mechanical Engineering*
VERSCHINGEL, R.H.C., PhD *McG., Professor of Chemistry and Biochemistry*
VERTHUY, M.E., MA *Tor., Associate Professor of Études françaises*
VILLATA, B., PhD *Torino, Italy, Assistant Professor of Modern Languages (Italian)*
VIPOND, M., PhD *Tor., Associate Professor of History*
VON GRUNAU, M., PhD *Tor., Associate Professor of Psychology*

WADE, P.F., PhD *McG., Associate Professor of Decision Sciences and Management Information Systems*
WAGNER, M.-F., PhD *Montr., Assistant Professor of Études françaises*
WAGNER, N., MA *C'dia., Associate Professor of Sculpture, Ceramics and Fibres*
WAGSCHAL, M., BA *Sir G. Wms., Assistant Professor of Painting and Drawing*
WAINIO, C., MFA *C'dia., Assistant Professor of Painting and Drawing*
WAINWRIGHT, B., DipFA *Van. Sch. of Art, Associate Professor of Printmaking and Photography*
WANG, J.C., PhD *W. Ont., Associate Professor, Centre for Building Studies*
WANG, Y.H., PhD *Ohio State, Associate Professor of Mathematics and Statistics*
WAREHAM, R.S., MA *Mich., Associate Professor of English*
WARREN, B., *Associate Professor of Theatre*
WATERS, K.E., MA *Oxf., Associate Professor of English*
WAUGH, T., PhD *Col., Associate Professor of Cinema*
WEBER, S., PhD *Alta., Associate Professor of Education*
WESTBURY, R.A., PhD *McG., Associate Professor of Chemistry and Biochemistry*
WHEELER, D., BSc *Lond., Professor Emeritus of Mathematics and Statistics*
WHITE, C.W., PhD *Stan., Associate Professor of Psychology*
WHITE, D., PhD *Pitt., Associate Professor of Psychology*
WHITE, J., MA *Yale, Lecturer in TESL (Applied Linguistics)*
WHITTOME, I., Dip *Van. Sch. of Art, Associate Professor of Painting and Drawing*
WIDDEN, P., PhD *Calg., Associate Professor of Biology*
WILKINSON, J., MA *R'dg., Sessional Lecturer in Teaching of English as a Second Language*
WILLIAMS, B., PhD *Car., Associate Professor of Political Science*
WILLS, R.O., MBA *Windsor, Associate Professor of Decision Sciences and Management Information Systems*
WILLSON, D., MA *Tor., Assistant Professor of Economics*
WISE, R.A., PhD *McG., Professor of Psychology*
WOLLENSAK, A., MFA *Yale, Assistant Professor of Design Art*
WOODSIDE, B., PhD *McM., Associate Professor of Psychology*
WOODSWORTH, J., PhD *McG., Associate Professor of Études françaises*

XISTRIS, G.D., DScA *Montr.,* Ing, *Associate Professor of Mechanical Engineering*

YOUNG, J.W., PhD *McG., Associate Professor of Geography*

ZACHARIAS, J.P., MA *Br. Col., Assistant Professor of Geography, and Urban Studies*
ZAHEERUDDIN, M., PhD *Alta., Assistant Professor, Centre for Business Studies*
ZAJDMAN, K., MA *McG., Sessional Lecturer in Accountancy*
ZAKI, M., PhD *Montr., Associate Professor of Mathematics and Statistics*
ZAVAGLIA, N., BA *C'dia., Assistant Professor of Cinema*
ZEMAN, V., PhD *Charles U., Prague, Associate Professor of Philosophy*
ZIELINSKI, Z.A., DTechSc *Politechnika Warszawska,* Ing, *Professor of Civil Engineering*
ZIENIUS, R.H., PhD *McG., Associate Professor of Chemistry and Biochemistry*
ZIOGAS, P.D., PhD *Tor., Professor of Electrical and Computer Engineering*
ZMEUREANU, R.G., PhD *C'dia., Assistant Professor, Centre for Building Studies*
ZUCKER, C., PhD *N.Y., Associate Professor of Cinema*
ZWIRZ, F., *Sessional Lecturer in Accountancy*

RESEARCH PROFESSORS

ATHIENITIS, A.K., PhD *Wat.*, PEng, *Research Assistant Professor, Centre for Building Studies*

BELL, M.F., PhD *N'cle. (U.K.), Research Assistant Professor of Chemistry and Biochemistry*

DADGOSTAR, B., PhD *Iowa, Visiting Research Scholar in Finance*

FABRIKANT, V., PhD *Moscow, Research Associate Professor of Mechanical Engineering*

FICK, C., *University Research Fellow in History*

FRIEWALD, B., PhD *McG., Concordia Research Fellow in English*

GIRALDEAU, L.-A., *University Research Fellow in Biology*

GRADUS, Y., PhD *Pitt., University Research Fellow in Geography*

GRANT, W.A., *University Research Fellow in Biology*

HAGHIGHAT, F., PhD *Wat., Research Assistant Professor, Centre for Building Studies*

KEATING, P., *Canada Research Fellow in History*

LAWRENCE, M., PhD *I.N.R.S. Energy, Research Assistant Professor of Chemistry and Biochemistry*

LE VAN MAO, R., PhD *Lyon, Research Associate Professor of Chemistry*

LI, Z.C., PhD *Tor., Research Associate Professor of Computer Science*

LUSTIGER-THALER, H., PhD *Montr., Canada Research Fellow in Sociology*

MENDELL, M., PhD *McG., Research Fellow in Political Science*

RAKHEJA, S., PhD *C'dia., Research Associate Professor of Mechanical Engineering*

ZHANG, C.-N., *Research Assistant Professor of Computer Science*

LIBRARIANS

APPLEBY, J., MLS *McG., Acting Head, Vanier Library*

BELANGER, A.M., MLS *McG., Record Maintenance and Products Librarian*

BENNETT, J., MLS *McG., Interlibrary Loans Librarian (Norris)*

BIEN, L., MS *L.I.U., Acting Slide Librarian, Fine Arts (Art History Slide Library)*

BRAZINSKIS, E., MLS *McG., Catalogue Database Librarian*

BRUCE, E., BLS *Tor., Reference Librarian (Norris)*

CAMERON, D., BLS *McG., Reference Librarian (Norris)*

CARPENTIER, L., MBibl *Montr., Government Publications Librarian*

COUGHLIN, C., MLS *Tor., Reference Librarian (SEL)*

DEALEY, J., MLS *McG., Reference Librarian (Norris)*

FERLEY, M., MLS *McG., Cataloguing Librarian*

GAMEIRO, M.H., MLS *McG., Reference Librarian (Vanier)*

GOLUBOWSKI, A., MLS *McG., Reference Librarian (Norris)*

HARRIS, L., MLS *McG., Reference Librarian (SEL)*

HAWKE, S., MLS *McG., Assistant Guidance Services Librarian, Guidance Library*

HOCHMANN, G., MLS *McG., Reference Librarian (Norris)*

HOFFMAN, S., MLS *McG., Reference Librarian (Norris)*

HUBBARD, M., MLS *Emporia Kansas State Coll., Librarian-in-Charge, Guidance Library*

JIRKOVSKY, Z., MLS *McG., Head, Science and Engineering Library*

KALB, S., MLS *McG., Head, Cataloguing Department*

KATZ, S.B., MLS *McG., Cataloguing Librarian*

KRISHTALKA, H., MLIS *McG., Reference Librarian (Vanier)*

MacLAURIN, C., MLS *McG., Reference Librarian (Norris)*

MAHARAJ, D., MLS *McG., Computer Assisted Services Librarian*

MASSICOTTE, M., MLS *McG., Systems Librarian*

NOBLE, R., MLS *McG., Reference Librarian (SEL)*

ORBACH, M., MLS *McG., Reference Librarian (Vanier)*

OTCHERE, F., MLS *McG., Authorities and Cataloguing Librarian*

PERRON, H., MLS *McG., Reference Librarian (Vanier)*

PERRY, K., MLS *SLIS (W. Ont.), Slide Librarian, Fine Arts (Art History Slide Library)*

POULIN, S., MLS *McG., Reference Librarian (Vanier)*

PRINCZ, J., MA *Montr., Associate Director of Libraries, Reader Services*

PUCHALSKI, I., MLS *McG., Cataloguing Librarian (Norris)*

ROHRLICK, R., MLS *McG., Head, Norris Library*

RUBINLICHT, L., MLS *McG., Head, Technical Services*

SENDEK, I., MLS *McG., Assistant Director, Administrative Services*

SINGER, L., MLS *McG., Non-Print Librarian (Norris)*

TURNBULL, J., MLS *McG., Assistant Slide Librarian, Fine Arts (Art History Slide Library)*

VILENO, L., MLS *McG., Reference Librarian (Vanier)*

WINIARZ, E., MLS *McG., Reference Librarian (SEL)*

WRIGHTSON, R., MLS *W. Ont., Head, Acquisitions Department*

NOTE: The following is a list of part-time Faculty for the 1990 calendar year.

FACULTY PART-TIME

ABDEL-RAHMAN, A.M., *Geology*

ABRAN, H., *Études françaises*

ACEMIAN, N., *Computer Science*

ACKERMAN, M., *Journalism*

ADAMS, K.D., *Music*

ADHIKARI, S., *Computer Science*

ADL-ZARABI, K., *Mathematics and Statistics*

AHMED, N., *Mathematics and Statistics*

AIKEN, R.B., *Sociology*

ALI, M.M., *Electrical and Computer Engineering*

AMASUNO, M., *Modern Languages and Linguistics*

ANASTASOPOULOS, S., *Economics*

ANDREWS, J., *Library Studies*

ANDRIKOPOULOS, K.N., *Accountancy*

APRAHAMIAN, S.A., *Sociology*

ARAGON, C., *Psychology*

ARCHAMBAULT, A., *Leisure Studies*
ARKLAY, J., *Communication Studies*
ARMSTRONG, C., *English*
ARMSTRONG, R., *Geography*
ASH, M., *Accountancy*
ASKEW, P., *English*
ASXENCIA, T., *English*
ATTEWELL, S., *Marketing*
AUBRY, F., *Cinema*
AUCLAIR, M., *Modern Languages and Linguistics*
AUDET, N., *Mathematics and Statistics*
AYOTTE, C., *Printmaking and Photography*

BABINSKI, M., *Modern Languages and Linguistics*
BALACHANDAR, R., *Civil Engineering*
BALAFOUTIS, C., *Electrical and Computer Engineering*
BALDWIN, J., *Communication Studies*
BALFOUR, B., *Fine Arts*
BALLERIO, B., *Études françaises*
BALTHAZARD, P., *Decision Sciences and Management Information Systems*
BANNERJI, S., *Economics*
BARAN, B., *Decision Sciences and Management Information Systems*
BARCLAY, B., *Teaching of English as a Second Language*
BARNARD, W., *Management*
BARON, D., *Marketing*
BASABE, O., *Modern Languages and Linguistics*
BASSIAS, K.V., *Physics*
BASTIEN, L., *Printmaking*
BAUGNIET, G., *Classics*
BAXTER, B., *Printmaking and Photography*
BEAUCHAMP, D., *Painting and Drawing*
BEAUDRY, A., *Painting and Drawing*
BEAUDRY, C., *Études françaises*
BECHARD, R., *Marketing*
BECK, J., *Management*
BEDARD, C., *Études françaises*
BELAIR, Rev. J., s.j., *Liberal Arts College*
BELOFF, R., *English*
BELTEMPO, J., *Psychology*
BENAROCHE, P., *Management*
BENJAMIN, R., *Mathematics and Statistics*
BENOIT, M., *English*
BENYAMIN-SEEYAR, A., *Electrical and Computer Engineering*
BEREZOWSKY, L., *Sculpture, Ceramics and Fibres*
BERGEY, A., *Études françaises*
BERGIER, M., *Marketing*
BERKOK, U.G., *Economics*
BERNARD, S., *Études françaises*
BERNATCHEZ, E., *Painting and Drawing*
BERNIER, N., *Management*
BERRY, C., *Exercise Science*
BERTRAND, L., *Theatre*
BISEN, R., *Mathematics and Statistics*
BISHAY, Y.M., *GEOL*
BLAIS, G., *Études françaises*
BLOUIN, J.-G., *Mathematics and Statistics*
BLOUIN, S., *Art Education and Art Therapy*
BLYSZCZAK, P., *Education*
BOBROW, B., *Education*
BOLDUC, S., *Accountancy*
BOLLA-PAQUET, C., *Études françaises*
BONKOWSKI, F., *Teaching of English as a Second Language*
BOON, G., *Decision Sciences and Management Information Systems*
BORDAN, J., *Engineering*
BORENSTEIN, J., *Cinema*
BOTTENBERG, J., *Modern Languages and Linguistics*
BOUCHARD, M., *Études françaises*
BOUCHARD-ULUSOY, D., *Études françaises*
BOURGEOIS, P., *Accountancy*
BOURQUE, S., *Études françaises*
BOURRET, J.J., *Accountancy*
BOZEL, F., *Mathematics and Statistics*
BRAUER, A., *Computer Literacy*
BREUER, R., *Études françaises*
BRISCOE, K., *Communication Studies*
BRISTOW, E., *Economics*
BRODEN, S., *Mathematics and Statistics*
BROWN, A., *Electrical and Computer Engineering*
BROWN, B., *Mathematics and Statistics*
BROWN, N., *Teaching of English as a Second Language*
BRYAN, J., *Journalism*
BUB, D., *Psychology*
BUCHANAN, C., *Computer Science*
BULLIARD, D., *Études françaises*
BURGESS, M., *Cinema*
BURSTEIN, S.B., *Psychology*
BUTTIENS, M., *Études françaises*
BUZZELL, J., *Art Education*
BYRNE, P., *Art Therapy*

CAMPANA, M., *Modern Languages and Linguistics*
CAMPBELL, D., *Computer Science*
CAMPBELL, H., *Management*
CANZER, B., *Marketing*
CARLEVARIS, A., *Photography*
CARRELL, N., *Marketing*
CARUSO, J., *Modern Languages and Linguistics*
CASTELINO, M., *Accountancy*
CATTONI NETO, A., *Political Science*
CAVERLY, G., *Sociology*
CERE, D., *Theological Studies*
CHAKER, R., *Études françaises*
CHALMERS, L., *Theatre*
CHAMANADJIAN, L., *Modern Languages and Linguistics*
CHAMPAGNE, D., *Études françaises*
CHANG SHENG, L., *Mathematics and Statistics*
CHARRON, R., *Communication Studies*
CHASSAGNE, S., *Mathematics and Statistics*
CHEADLE, N., *Modern Languages and Linguistics*
CHEN, P., *Chemistry and Biochemistry*
CHERNEY, N., *Management*
CHERNIACK, M., *Computer Science*
CHERRIER, P., *Physics*
CHICHEKIAN, G., *Geography*
CHOQUETTE, M., *English*
CHOUINARD, N., *Exercise Science*
CLARK, D., *Music*
CLARK, P., *Theatre*
CLARK, T., *Photography*
CLEMENT, S., *Management*
CLENDENNING, I., *English*
CLERGUE, J., *Études françaises*
CLERICI, G., *Engineering*
COALLIER, R., *Finance*
COCHRANE, G., *English*
COHEN, L., *Psychology*
COHEN, R., *Marketing*
COLAS, H., *Marketing*
COLLE, J., *English*

COMEAU, M., *Electrical and Computer Engineering*
CONNELLY, J., *Teaching of English as a Second Language*
CONROD, B., *Psychology*
CONTOGIORGIS, M., *Modern Languages and Linguistics*
COOKE, M., *Journalism*
COOKS, F., *Management*
COOLEY, G.M., *Art Education*
COON, W., *Music*
COOPER, T., *Psychology*
CORBEIL, M., *Mathematics and Statistics*
CORMAN, D., *Photography*
CORRAL, I., *Urban Studies*
COSSETTE, L., *Psychology*
COSTELLO, V., *Sculpture, Ceramics and Fibres*
COTE, M., *Psychology*
COTE, R., *Chemistry and Biochemistry*
COWAN, L., *Teaching of English as a Second Language*
COWEN, P., *Cinema*
CROCHETIERE, M., *Cinema*
CROCI, O.L.G., *Liberal Arts College*
CUTTELL, D., *Leisure Studies*
CYR, J., *Études françaises*

DAGENAIS, F., *Art History*
DALFEN, K., *Applied Social Science*
DANIS, J.-C., *Political Science*
DAOUST, J., *Mechanical Engineering*
DARDICK, S., *English*
DAS, S.K., *Electrical and Computer Engineering*
DAUBNER, E., *Art History*
DAVIES, H., *Cinema*
DEBIPARSHAD, N., *Economics*
DEGUEE-BERTRAND, C., *Études françaises*
DEL BURGO, C., *Études françaises*
DELISLE, M., *Painting and Drawing*
DEMERS, P.-Y., *Études françaises*
DENYST-CLARK, A., *Theatre*
DE ROCHEMONT, N., *Cinema*
DESAULNIERS, D., *Geology*
DESJARDINS, M., *Sociology*
DESLAURIERS, P., *Geography*
DESLAURIERS, R., *Études françaises*
DESRANLEAU, C., *Political Science*
DES ROSIERS, R., *Management*
DIDOMENICO, J., *Mathematics and Statistics*
DIEGUEZ, I., *Modern Languages and Linguistics*
DILEO, J., *Painting and Drawing*
DI LULLO, G., *Modern Languages and Linguistics*
DIMAIO, J., *Chemistry and Biochemistry*
DIND, A., *Music*
DIONNE, M., *Études françaises*
DOBBIN, L., *Music*
DOMANSKI, A., *Sociology*
DONAHUE, J., *Modern Languages and Linguistics*
DONALD, T., *Theatre*
DONOVAN, J., *Management*
DONOVAN, M., *Communication Studies*
DOROZYNSKI, J.L., *Management*
DOUCET BOARD, A., *Education*
DOUGHTY, M., *Chemistry and Biochemistry*
DOUGLAS, D., *Cinema*
DOWN, S., *Finance*
DOYLE, M., *English*
DRUMMOND, Rev. S., s.j., *Biology*
DUARTE, P., *Physics*
DUBE, L., *Mathematics and Statistics*
DUBINSKY, L., *Painting and Drawing*
DUBOIS, P., *Computer Science*
DUBREUIL, E., *Management*
DUCKETT, M., *History*
DUCKWORTH, M., *Cinema*
DUFRESNE, D., *Mathematics and Statistics*
DUNCAN, D., *Library Studies*
DUVAL, R., *Painting and Drawing*
DUVIEUSART, B., *Études françaises*
DYDYK, L., *English*
DYKYJ, O., *Cinema*

ELIASHIV, A., *Religion*
ELIJAH, J., *Finance*
EL KHALIL, E., *Decision Sciences and Management Information Systems*
ELLIOTT, D., *Painting and Drawing*
ELLIS, D., *Sociology*
ENESCO, M., *Biology*
ENTUS, E., *Mathematics and Statistics*
EOUANZOUI, K.B., *Economics*
ERRUNZA, M.J., *Marketing*
ESGUERRA, M., *Design Art*
ESTEBAN, J., *Modern Languages and Linguistics*

FABIEN, I., *Art Education*
FAJZEL, G., *Marketing*
FALLAH, S., *Electrical and Computer Engineering*
FARAH-HERBERT, L., *Études françaises*
FARES, F., *Mathematics and Statistics*
FARUQUE, S.M., *Electrical and Computer Engineering*
FARUQUI, M., *Management*
FAUBERT, J., *Psychology*
FAUSHAL, A., *Mechanical Engineering*
FEELY, A., *Journalism*
FEIST, D., *Communication Studies*
FIGLARZ, E., *Management*
FILIATRAULT, P., *Management*
FIMA, S., *Biology*
FISET, J.W., *Education*
FISHBANE, S., *Religion*
FITZPATRICK, I., *Social Aspects - Engineering*
FLEURY, J., *Music*
FLOOD-TURNER, J., *Painting and Drawing*
FLORAKAS, N., *Management*
FORD-ROSENTHAL, H.A., *Sociology*
FOREMAN, M., *Communication Studies*
FOURNIER, P., *Études françaises*
FOURNIER, P., *Études françaises*
FRANCESCONI, M., *Études françaises*
FRANCIERE-BEISSEL, A., *English*
FRANCIS, R., *Physics*
FREEMAN, V., *Teaching of English as a Second Language*
FREGEAU, P., *Political Science*
FROHLICH, M., *Teaching of English as a Second Language*
FROHLICK, N., *Photography*
FROST, P., *Geography*
FRUMKIN, B.A., *Art History*
FU, L.-Y., *Mathematics and Statistics*

GADOURY, G., *English*
GAGNE, M., *Études françaises*
GALINA, Z.H., *Psychology*
GAMOY, B., *Painting and Drawing*
GARAVITO, J., *Modern Languages and Linguistics*
GARBER, R., *Art Therapy*
GATIEN, D., *Mathematics and Statistics*
GAUTHIER, P., *Mathematics and Statistics*
GAVIN, J., *Theological Studies*

GECA, D., *Decision Sciences and Management Information Systems*
GERICKE, I., *Art Therapy*
GERMINERIO, R.J., *Biology*
GHAN, L., *English*
GHAN, Z., *Teaching of English as a Second Language*
GHORAYEB, S., *Études françaises*
GILARDINO, S., *Modern Languages and Linguistics*
GILLBERT, C., *Science and Human Affairs, and Urban Studies*
GILMORE, M., *Marketing*
GINTOWT, R., *Management*
GIROLAMI, M., *Library Studies*
GLASGOW, P., *Classics*
GLASS, K., *Science and Human Affairs*
GLICK, M., *Psychology*
GLUCK, Y., *Sociology*
GODLEY, J.S., *Science and Human Affairs*
GOLD, C., *Art Therapy*
GOLD, R., *Teaching of English as a Second Language*
GOLDIN, B., *Management*
GOLDSTEIN, M., *Contemporary Dance*
GOMEZ-PERELES, J., *Sculpture, Ceramics and Fibres*
GOUGEON, M.-A., *Contemporary Dance*
GOUGH, G., *Études françaises*
GOULD, R., *Teaching of English as a Second Language*
GOURLAY, M., *Communication Studies*
GOYETTE, L., *Cinema*
GRACE, M.K., *Accountancy*
GRAMI, A., *Electrical and Computer Engineering*
GREEN, D., *Geography*
GREEN, D., *Political Science*
GREENSPAN, H., *Mathematics and Statistics*
GREENSPON, H., *Accountancy*
GREGOIRE, L., *Contemporary Dance*
GROLEAU, C., *Business Studies*
GROSS, M., *Teaching of English as a Second Language*
GROSS, P., *Applied Social Science*
GUILLEMETTE, L., *Contemporary Dance*
GUT, R., *Accountancy*
GUTSCHE, C., *Photography*
GUZDER, J., *Art Therapy*

HABATU, R., *Economics*
HABER, M., *Marketing*
HABERL, F., *Modern Languages and Linguistics*
HAGUE, M., *Economics*
HAILPERN, R., *Teaching of English as a Second Language*
HALL, J., *Management*
HALL, S., *Theatre*
HALTER, R.H., *Teaching of English as a Second Language*
HAMEL, C., *Études françaises*
HAMMI, A., *Economics*
HANSIS, R.B., *Accountancy*
HARGRAVE, G., *Communication Studies*
HARGROVE-SHEPLEY, S., *English*
HARMAT, H., *Modern Languages and Linguistics*
HARRIS, L., *Journalism*
HARRIS-ADLER, R., *Journalism*
HARRISON, E., *Mathematics and Statistics*
HARRISON, R., *English*
HARROW, R., *Mathematics and Statistics*
HARSANY, M., *Psychology*
HARWOOD, S., *Études françaises*
HASSAN, E., *Electrical and Computer Engineering*
HAUGHIAN, K., *English*
HAWKINS, M., *Art Education*
HAZELTON, H., *Modern Languages and Linguistics*
HEBERT, L., *Études françaises*
HEFT, R., *Education*
HEILLIG, J., *Sociology*
HENDERSON, S., *Cinema*
HENIGHAN, S., *English*
HERSHORN, M., *Political Science*
HEURR, R., *Design Art*
HNATCHUK, J., *Economics*
HOBBINS, J., *Library Studies*
HOCKENSTEIN, P., *Education*
HOFFMAN, A., *Geography*
HOGARTH, D., *Communication Studies*
HOLMES, K., *Teaching of English as a Second Language*
HOMEL, D., *Études françaises*
HOODFAR, H., *Sociology*
HOOLEY, L., *English*
HOPKINS, T., *Painting and Drawing*
HORVATH, A., *Computer Science*
HUMPHREYS, M., *Études françaises*
HUNG, H., *Mathematics and Statistics*
HUNTER, J., *Teaching of English as a Second Language*

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ISENBERG-GRZEDA, C., *Art Therapy*
ISLAM, M., *Economics*
ISLAM, S., *Political Science*
ISRAEL, G., *Applied Social Science*

JABBAR, A., *Accountancy*
JACOBS, C., *Biology*
JACOBS, L.L., *Sociology*
JACOBSON, L., *Accountancy*
JACOBY-KING, P., *Applied Social Science*
JAMIESON, G.H., *Education*
JAMIL, H., *Computer Science*
JANE WHITTAKER, S., *Journalism*
JANUSZ, K., *Sociology*
JAVORNIK, G.J., *Management*
JENKINS, C., *Economics*
JESIEN, W., *Engineering*
JO KLEIN, N., *Communication Studies*
JOHN, W., *Theological Studies*
JOINER, S., *Applied Social Science*
JONASSOHN, K., *Psychology*
JOSEPH, H., *Religion*
JOURDE, L., *Études françaises*
JUERGENS, D., *Library Studies*
JUSTMANN-PLUS, E., *Art Education*

KADRI, A., *Economics*
KAFENZAKIS, M., *Accountancy*
KALMAN, R.-J., *English*
KALOGEROPOULOS, D., *Psychology*
KAMTHAN, P.K., *Mathematics and Statistics*
KANCLER, S., *Études françaises*
KAPLAN, L., *Religion*
KARDOS, G., *Painting and Drawing*
KAREN, R., *Management*
KARIM, M., *Mathematics and Statistics*
KASK, J., *Journalism*
KAUFMAN, H., *Études françaises*
KAY, L., *Journalism*
KEATON, R., *Political Science*
KELLY, T., *Art Therapy*
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KERMANI, M., *Decision Sciences and Management Information S stems*
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KHAN, T., *Accountancy*
KHANAM, B.R., *Economics*
KING, H., *Painting and Drawing*
KING, M., *Marketing*
KINSLOW, V., *Music*
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KOTNIK-MANCINI, D., *Modern Languages and Linguistics*
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KRAUSZ, P., *Painting and Drawing*
KREDL, P., *Commerce and Administration*
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KRUK, R.V., *Psychology*
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LALONDE, M., *Religion*
LALONDE-HURTUBISE, N., *Études françaises*
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LAMOTHE, M., *Cinema*
LANCTOT, F., *Études françaises*
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LANCTOT, S., *Painting and Drawing*
LANDRY, E., *Mathematics and Statistics*
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LANIEL, D., *Études françaises*
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LAPLANTE-L'HERAULT, J., *Études françaises*
LAPOINTE, P., *Accountancy*
LARGE, M., *Art History*
LARIN, L.-H., *Painting and Drawing*
LARSEN, C., *Education*
LARUE, J., *Cinema*
LASZLO, G.P., *Engineering*
LAU, H.T., *Computer Science*
LAULY, J.-P., *Accountancy*
LAURIN, C., *Études françaises*
LAUZIERE, J., Études françaises
LAVIGNE, A., *Political Science*
LAVOIE, J.-J., Études françaises
LAWRENCE, L., *Library Studies*
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LEAHY, D., *English*
LEB, D., *Études françaises*
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LEDUC, G., *Biology*
LEE, L., *Mathematics and Statistics*
LEFEBVRE, M., *Chemistry and Biochemistry*
LEFEVRE, E., *Psychology*
LEONARD, G., *Political Science*
LEONE, P., *Psychology*
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LESAGE, M., *Science and Human Affairs*
LEVY, A., *History*
LEVY, J., *Finance*
LEWIS, M., *English*
LI, T., *Economics*
LI, Z.-C., *Computer Science*
LIEBICH, C., *Études françaises*
LIMOGES, N., *Modern Languages and Linguistics*
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LITTLE, S., *Religion*
LO, E., *Education*
LOBEL, M., *Applied Social Science*
LOTEY, A., *Études françaises*
LOU, Y.-S., *Mathematics and Statistics*
LOUDER, F., *English*
LOUGHLIN, D., *Classics*
LOUGHMAN, M., *Marketing*
LO VASCO, F., *Mathematics and Statistics*
LOW, T., *Management*
LUNDGREN-CAYROL, K., *Education*

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MACDONALD, K., *Classics*
MACDONELL, R., *Journalism*
MACGREGOR, S., *English*
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MACLAREN, G., *Marketing*
MACMILLAN, D., *Engineering*
MACOOSH, D., *Marketing*
MACOOSH, G., *Mathematics and Statistics*
MADZUMDER, M., *Mathematics and Statistics*
MAINBERGER, R., *Sculpture, Ceramics and Fibres*
MAJOR, W., *Leisure Studies*
MAJZELS, P., *Education*
MAJZELS, R., *English*
MALLETTE, Y., *Political Science*
MALLOUGH, S., *Theatre*
MALWAL, K., *Computer Science*
MALY, M., *Biology*
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MANN-FEDER, V., *Psychology*
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MARELLI, M.-P., *Études françaises*
MARIN, M., *Computer Science*
MARKOLIN, C., *Modern Languages and Linguistics*
MARTENS, M.-J., *Teaching of English as a Second Language*
MARTIN, M., *Music*
MASCUILLI, J., *Political Science*
MASON, J.S., *English*
MASON, T., *Journalism*
MASSEY, M., *Teaching of English as a Second Language*
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MAZDA, B., *Mathematics and Statistics*
MAZOFF, D., *English*
MCAULEY, J., *English*
MCCONNELL, R., *Journalism*
MCDEVITT, N., *English*
MCDONALD, K., *Leisure Studies*

MCEWEN, J., *Painting and Drawing*
MCININCH, D., *Political Science*
MCLELLAN, L., *Exercise Science*
MCMANUS, H., *Communication Studies*
MEADOWS, D., *Accountancy*
MEANA, L., *Geography*
MEARNS, R., *Mathematics and Statistics*
MENGER, G., *Music*
MENZIES, S., *Cinema*
MERCIER, J., *Political Science*
MERHI, H., *Sociology*
METSON, G., *Painting and Drawing*
MILLER, A., *Sculpture, Ceramics and Fibres*
MILLER, J., *Theatre*
MILLER, R., *Painting and Drawing*
MILLER, V., *Economics*
MINTZBERG, Y., *Art Education*
MITCHELL, J., *Psychology*
MOALBAYE, A., *Simone de Beauvoir Institute*
MOGHADDAM, M., *English*
MOLLER, F., *Engineering*
MOLLER, L., *Education*
MOLLOY, A., *Management*
MONACO, E., *Applied Social Science*
MONGENOT, H., *Études françaises*
MONKMAN, V., *Simone de Beauvoir Institute*
MONTIFROY, G., *Political Science*
MONTIN, K., *Études françaises*
MONTPETIT, J., *Education*
MOREL, D., *Teaching of English as a Second Language*
MORRIS,. N., *Education*
MORRISETTE, L., *Mathematics and Statistics*
MROZ, S., *Accountancy*
MUCCI, G., *Accountancy*
MULLINS, A., *English*
MURRAY, R., *Painting and Drawing*

NACHFOLGER, S., *Political Science*
NADER, J., *Political Science*
NANDURI, R., *Political Science*
NEHER, A.J., *Art History*
NEHORAI, M., *Religion*
NEILL, C., *Theatre*
NELSON, T., *Painting and Drawing*
NEMETH, G., *Psychology*
NEMIROFF, M., *English*
NEUDORF, S., *Painting and Drawing*
NEUFELD, K., *Accountancy*
NEUMAN, C., *Marketing*
NEWSHAM, G., *Teaching of English as a Second Language*
NICHOLLS, W.D., *Economics*
NICHOLSON, P., *Education*
NISH, B., *Études françaises*
NIXON, V., *Liberal Arts College*
NOCHERA OUIMETTE, M.-E., *Modern Languages and Linguistics*
NOEL, M.B., *Psychology*
NOLTING, G., *English*
NORVID, A., *Painting and Drawing*
NOWAK, T., *Accountancy*

O'FLYNN, J., *Classics*
OHNONA, N., *Biology*
OLESIK, D., *Economics*
OLIVER, D., *Theological Studies*
O'MEARA, J., *English*
OSBORNE, J., *Mathematics and Statistics*
OSTERMANN, M., *Sculpture, Ceramics and Fibres*
OSTIGUY, J., *Mathematics and Statistics*
OSTOJIC, G., *Physics*
OSTROFF, P., *Religion*

OVERBURY, O., *Psychology*
OXLEY, D., *Painting and Drawing*

PADDON, L.-M., *Communication Studies*
PANAH, S., *Computer Science*
PANET-RAYMOND, A., *Marketing*
PANETTA, N., *Accountancy*
PANT, B.C., *Chemistry and Biochemistry*
PAO, D.C.W., *Computer Science*
PAO-MERCIER, L., *Sociology*
PARADIS, S., *Art Therapy*
PASDERMAJIAN, P., *Sociology*
PASK, A.K., *English*
PATERSON, P., *Applied Social Science*
PATRY, P., *Printmaking*
PAULEZ, G., *Finance*
PEARCE, B., *Marketing*
PELUSO, M., *Political Science*
PEREZ, I., *Modern Languages and Linguistics*
PERREAULT, S., *Geology*
PETCOFF, C., *Études françaises*
PETERS, K., *Painting and Drawing*
PHILLIPSON, D.J.C., *Science and Human Affairs*
PHULL, P., *Mathematics and Statistics*
PHULL, S., *Mathematics and Statistics*
PICARD, M., *Modern Languages and Linguistics*
PIETSCH, A., *Fine Arts*
PIGGOTT, G., *Modern Languages and Linguistics*
PIPER, J., *Library Studies*
PLAIN, O., *Études françaises*
PLOURDE, M., *English*
POCOCK, J., *Sociology*
POLAK, M., *English*
POLLAK, L., *Études françaises*
POLLAK, R., *Cinema*
POPESCU, A., *Marketing*
PORTERFIELD, W., *Marketing*
PRAKASH TRIPATHI, T., *Mathematics and Statistics*
PRATT, G., *Modern Languages and Linguistics*
PRENDERGAST, L., *Decision Sciences and Management Information Systems*
PRESTON, E., *Cinema*
PROULX, R., *Études françaises*
PROVOST, P., *Cinema*
PRUSKA-CARROLL, M., *Political Science*
PTITO, A., *Psychology*
PUJOL, L., *Modern Languages and Linguistics*

RABINOVITCH, B., *Art History*
RADECKI, B., *Painting and Drawing*
RAGAVEN, C., *Sociology*
RAHMAN, S.H., *Mathematics and Statistics*
RAINS, C., *Sociology*
RAJABIEH-SHAYAN, Y., *Computer Science*
RAJIVA, V., *Political Science*
RAM, H.S.G., *Civil Engineering*
RAMAGE, L.J., *Sociology*
RAMASWAMY, K., *Electrical and Computer Engineering*
RAMBAHAL, R., *Finance*
RAMBARAN, D.K., *Economics*
RANTA, L., *Teaching of English as a Second Language*
RAO, D.N., *Political Science*
RASHID, S., *Religion*
RAUDSEPP, K., *Music*
REDDY, G.R., *Electrical and Computer Engineering*
REEVES, S., *Painting and Drawing*
REGLER, E., *Design Art*

REICH, E., *Computer Science*
REID, C., *Accountancy*
REID, D., *Mathematics and Statistics*
RHEAULT-BOISSE, P.-A., *Études françaises*
RIBEAUX, S., *Education*
RICHARD, J.-Y., *Études françaises*
RICHARD, M., *Art Education*
RICHTER, H., *Modern Languages and Linguistics*
RIGAULT, O., *Études françaises*
RIVARD, J., *Études françaises*
ROBERGE, L., *Sculpture, Ceramics and Fibres*
ROBERTSON, K., *Education*
ROGER, N., *Cinema*
ROHRLICK, M., *Painting and Drawing*
ROMI SINGH, K., *Decision Sciences and Management Information Systems*
ROSEN, S., *Marketing*
ROSENBERGER, W., *Accountancy*
ROSS, Y., *Music*
ROSSI, V., *English*
ROSSIN-ARTHIAT, M., *Decision Sciences and Management* Information Systems
ROTH, L., *Communication Studies*
ROTHMAN, K., *Management*
ROTSTEIN, M., *Modern Languages and Linguistics*
ROURKE, M., *Education*
ROUSSEAU, B., *Sculpture, Ceramics and Fibres*
ROY, A., *Études françaises*
RUDDY, J., *Mathematics and Statistics*
RUTENBERG, M., *Leisure Studies*
RUTTENBERG, B., *Sociology*
RYAN, N., *Mechanical Engineering*

SADER, H., *Social Aspects - Engineering*
SAHARUNI, R., *Photography*
ST-ONGE, J.G., *Marketing*
SAKS, R., *Marketing*
SALAHUB, J., *Art History*
SALMOND, N., *Religion*
SALVAIL, R., *Photography*
SAMSON, L., *Music*
SAMY, M., *Art Therapy*
SANDBLOM, L., *Études françaises*
SANG, M., *Marketing*
SANTANA, C.-L., *Computer Science*
SAVOIE, L., *Études françaises*
SAXENA, V.C., *Engineering*
SAYA, Y., *Accountancy*
SBARRA, U., *Modern Languages and Linguistics*
SCHAPER, M., *Modern Languages and Linguistics*
SCHAUS, P., *Liberal Arts College*
SCHENK, R.B., *Accountancy*
SCHINDLER, D., *Psychology*
SCHNEIDER, J., *Études françaises*
SCHOFIELD, M., *Education*
SCHUBERT, H., *Art History*
SCHWARTZ, G., *Music*
SCIRETTA, M., *Modern Languages and Linguistics*
SCOTT, M., *Applied Social Science*
SCOTT, S., *Painting and Drawing*
SEDDON, E., *English*
SEDGWICK, D., *Art History*
SEGAL, C., *Applied Social Science*
SEGAL, M., *English*
SEILER, R., *Engineering*
SELIG, G., *Biology*
SEPPANEN, R., *English*
SERRUYA, C., *Études françaises*
SHAFAAT, A., *Decision Sciences and Management Information Systems*
SHAFFER, B., *Cinema*
SHAUGHNESSY, R., *Mathematics and Statistics*
SHER, O.S., *Economics*
SHINN, T., *Science and Human Affairs*
SILAS, M., *Engineering*
SILIAUSKAS, G., *Education*
SIMON, K., *Études françaises*
SIMPSON, M., *Teaching of English as a Second Language*
SIMS, M., *English*
SINGER, G.F., *Design Art*
SINGER, K., *Decision Sciences and Management Information Systems*
SINGER, L., *Art History*
SING FAT, G., *Accountancy*
SISTI, A., *English*
SKELTON, S., *Biology*
SKERRY, S., *Psychology*
SKEWES-COX, E., *Études françaises*
SMITH, A., *Leisure Studies*
SMITH, B., *Psychology*
SMITH, L., *Cinema*
SMITH, V., *Management*
SNYDER, J., *Psychology*
SOLEYMANI, M.R., *Electrical and Computer Engineering*
SOMERS, B., *Economics*
SOROKA, R., *Marketing*
SOTIRON, M., *Journalism*
SPACAGNA, G., *Modern Languages and Linguistics*
SPENCE, A., *Psychology*
SRINIVASAN, N., *Electrical and Computer Engineering*
SROUJI, H., *Painting and Drawing*
STAFFORD, J., *Applied Social Science*
STAVRO, A., *Marketing*
STEELE, A., *Computer Science*
STEVENS, L., *Philosophy*
STEWART, J., *Journalism*
STONE, J., *Education*
STONE, S., *Simone de Beauvoir Institute*
STONE, S., *Music*
STOREY, C., *Sociology*
STORME, F., *Études françaises*
STOTLAND, S., *Psychology*
STRATHY, N., *Computer Science*
STYAN, E., *Modern Languages and Linguistics*
SU, H., *Mechanical Engineering*
SUBBA RAO, B.N., *Mechanical Engineering*
SULLIVAN, F., *Painting and Drawing*
SULLIVAN, J., *Music*
SURESH, N., *Mechanical Engineering*
SUTTON, W., *Theatre*
SVATEK, P., *Cinema*
SWINTON, N., *Biology*
SZABAD-SMYTH, L., *Art Education*
SZAMOSI, G., *Science College*
SZIGETVARI, Z., *Commerce*
SZPILBERG, A., *Music*
SZYLOWIEC, T., *Mathematics and Statistics*

TACIUM, D., *English*
TAKEFMAN, J., *Psychology*
TAMAS, S., *Accountancy*
TANG, Y.Y., *Computer Science*
TARD, G., *Études françaises*
TARDIF, Y., *Management*
TARIKERE, N., *Mathematics and Statistics*
TATE, D., *Leisure Studies*
TENNANT, J., *Applied Social Science*

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TESOUBLEKAS, G., *Economics*
THOMAS, A., *Psychology*
THOMAS, M., *Education*
THOMAS, T., *Political Science*
TIWARI, U., *Mathematics and Statistics*
TOGANE, M., *English*
TOTARO, D., *Cinema*
TOWNSEND, M., *Painting and Drawing*
TOWNSON, L., *Mathematics and Statistics*
TRAN, T., *Études françaises*
TRECARTIN, F., *English*
TROTT, C., *Sociology*
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TSAKIRI, I., *Philosophy*
TSASIS, P., *Management*
TSIGARIS, P., *Economics*
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TURNER, D., *Music*
TUROVSKY, E., *Music*
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TURPIN, A., *Cinema*
TURSKI, G., *Philosophy*

ULLMANN, F., *Études françaises*
UNGAR, A., *English*
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VAN COILLIE, R., *Biology*
VANDYCKE, J., *Études françaises*
VARAGNOLO, L., *Études françaises*
VARDAXIS, V., *Exercise Science*
VASSAL, A.-F., *Études françaises*
VERAQUIN, P., *Music*
VERONNEAU, P., *Cinema*
VERRON, A., *Études françaises*
VICTOR, N., *Accountancy*
VIGEANT, M., *Simone de Beauvoir Institute*
VINCENT, A., *Theatre*
VINCENT, M., *Sculpture, Ceramics and Fibres*
VOGT, M.-C., *Études françaises*
VON KAPPER, G., *Political Science*

WAGNER, P., *Contemporary Dance*
WAHHAB, M., *Finance*
WALKER, B., *Social Aspects - Engineering*
WALKER, P., *Finance*
WALKER, S., *Applied Social Science*
WANG, S.-S., *Economics*
WARREN, R., *Études françaises*
WEATHERBY, L., *Library Studies*
WEINBERG, S., *Education*
WELCH, W., *Theatre*
WELLER, N., *Teaching of English as a Second Language*
WELLS, D., *Education*
WEN, Y., *Chemistry and Biochemistry*
WENG-GARRETY, W., *Education*
WHITEHEAD, J., *Education*
WHITELAW, A., *Art History*
WHITTAKER, C., *Political Science*
WICKHAM, Rev. J., s.j., *Theological Studies*
WIELAND, T., *Computer Science*
WIESNER, W., *Management*
WILSON, J., *Art Therapy*
WILSON, J., *English*
WILSON, W., *History*
WINIARZ, J., *Music*
WINSLOW, D., *Sociology*
WINTER, J., *English*
WISEMAN, M., *Biology*
WONG, E., *Finance*
WONG, S., *Finance*
WRIGHTSON, R.J., *Library Studies*
WU, W.-H., *Mathematics and Statistics*

XU, K., *Economics*

YACOUT, S.M., *Decision Sciences and Management Information Systems*
YAN-MILLER, M., *Sculpture, Ceramics and Fibres*
YOUNG, S., *Applied Social Science*

ZANIN, L., *Computer Literacy Course*
ZHANG, X., *Communication Studies*
ZHANGJI, Y., *Communication Studies*
ZINEGYL, A., *Marketing*
ZISKIN, G., *Theatre*
ZUCCARO, C., *Marketing*

SECTION 200

EQUIVALENTS INDEX

Note: Recent curricular changes will affect some of the entries in the following lists. Students should consult with their programme adviser if they already have credits for a course which may be equivalent to another.

200.1 Faculty of Arts & Science

Curricular changes in the Faculty will affect some of the entries in the following list. Students should consult with their programme adviser if they already have credits for a course which may be equivalent to another.

Students who have taken a given course under an old number may not repeat it for credit under an equivalent number.

NOTE: The use of 'C' in the course prefix is discontinued. Unless otherwise indicated, a course previously prefixed with a C is equivalent to the identically numbered one without the C prefix.

NOTE: For old course numbers used prior to 1980-81, see Undergraduate Calendar 1984-85, or consult programme adviser.

Course	Old Numbers and Equivalents
Anthropology	
202	C211
303, 304	C362
311	368
370, 371	C369
401, 402	C469
495	C499
Applied Social Science	
240	C355, C356; C351
250	C250, C355; C212
313	413
318	418
331	431
353	453
354	454
356	456
361	461
420	C421
440	C441
450	C451, C452
490	C400
Biology	
210	C205
234, 235	C238
261	C260
322	C222 OR 222
330	C231
334	C237
337, 338	C238 OR C234, C235
344	C246
346, 349	348
352	C461
445	C339
480	C450
481	C451

Course	Old Numbers and Equivalents
Canadian Studies	
220	INTE C220
320	INTE C320
321	INTE C321
421	INTE C421
422	INTE C422
Chemistry and Biochemistry	
217, 218	211
233	334
238, 239	338
271, 374, 375	C372, C373; C371
304	C303
312	C310, C315; C314, C319
324, 325	C321, C322, C329
327	C328
330, 337	339
332	232, C232 (1983-84, 1984-85)
336	335, 435
341	C342, C348
392	C390, C397 OR C390, C399
491	C490, C497 OR C490, C499
Classics	
230	HIST 219
240	HIST 223
241	HIST 224
242	HIST 225
243	C343 HIST 226
266	C264 HIST C227
267	C265 HIST C229
324	C224
325	C225
326, 327	C320 CLAS C220

Course	Old Numbers and Equivalents		
341	241	HIST 323	HIST 224
343	243	HIST 327	HIST 226
354, 355	254		

Communication Studies

320	C205		
321	C205		
322, 323	C304		
JOUR 343	COMS C343	C340 C342	
351	C350		
352	C467		
366, 367	C363		
JOUR 446	COMS C446		
454, 455	C442		
460, 461	C465		
468, 469	C466		
470, 471	C468		
496, 497	C495		

Economics

221	DESC C243, MATH 207 or MATH 242, SOCI 212, PSYC 315
222	DESC C244, MATH 243, SOCI 213, PSYC 316
251, 252	252
408	C415

Education

Adult Education (previously Andragogy)

201, 202		C200
333		C330, C331
344, 345	C343	C340 or C341, C342

Education

264	C392
371	C370
373	C270
381	386
387	C381
422, 423	C421
428, 429	C430
241, 440	C441
473, 474	C470
475	C472
490	C497
491	C498

Course	Old Numbers and Equivalents	

English

212, 213	211	
306	304	
307		C297
308		C298
309	319	
311	302	
352, 353		C350
355		C354
356	286	
357	287	
358	288	
360	295	
361	296	
365	363, 364	
370		C376, C377
381	251	
382	248	
384		C215
471, 472	478	
473	479	
474	480	

English as a Second Language

209, 210	C201

Études Françaises

FRAN 208*	FRAN C300*
FRAN 266, FRAN 267	FRAN 262*
FRAN 305	FRAN 304, FRAN 305
FRAN 306	FRAN 306, FRAN 307
FRAN 308*	FRAN C301*
FRAN 384*	FRAN C368, FRAN C369
FRAN 402	FRAN C324
FRAN 409 or 410	FRAN C408*
FRAN 496*	FRAN C498*
FRAN 497*	FRAN C499*
TRAD 200	FRAN C260
TRAD 201 or 202	FRAN C261
TRAD 301 or 302	FRAN C360
TRAD 303 or 304	FRAN C361
TRAD 310	FRAN C460
TRAD 311	FRAN C461
TRAD 401	FRAN C470
TRAD 402	FRAN C471
TRAD 403	FRAN C362
TRAD 404	FRAN C363
TRAD 405	FRAN C368
TRAD 406	FRAN C369
TRAD 408	FRAN C365
TRAD 409 or 410	FRAN C463
TRAD 412	FRAN C364
TRAD 414	FRAN C462
TRAD 420*	FRAN C465*
TRAD 421*	FRAN C464*

*6 credits

Course	Old Numbers and Equivalents

Exercise Science††

215	C215 C315, C316 C413, C415
221	MATH 207† BIOL 222† PSYC 315†
262	C337
308	C309 C310
336	C433
351	C451
403	C402
404	C401
414	C317
454	C417
456	C453
457	C453

†Equivalents valid prior to 1988-89 only.
††For BIOP equivalents see 1987-88 Calendar.

Geography

267	C265 C266 C262
271	C275 C276
275	C271
276	C271
312	C412
315	C316
347	C341
352	C356
353	C356
358	C355
359	C355
433	C401

Geology

224	C215	
231	C221	
232	C223	
331	C310	
332	C317	C412
415	C315	
417	C416	C412

Hebrew

300	C235

History

211	316	
219		CLAS C230
221		CLAS C231
223		CLAS C240
224		CLAS C241
225		CLAS C242
226	C320 C321	CLAS C243
	C227	CLAS C266, C264
	C229	CLAS C267, C265

Course	Old Numbers and Equivalents		
300 301	C311		
310 311	312		
313 314	315		
320 321	C354		
323	224	CLAS 341	CLAS 241
327	226	CLAS 343	CLAS 243
329 331	C318		
361	278 279	270 271 272	
363	278 279	270 271 272	
364 365	C361		
366 367	C363		
371 374	276 277	C275	
377 378	C347		
379	C380	URBS C379 URBS C382	URBS C380
381 382	C330		
383 384	C335		
385 386	C336		
387	347		
388 389	C346		
397	C344		
426	C425 C427 C428		
430	C431 C432 C433		
436	C434 C435		

Interdisciplinary Studies

215	MATH 215
223	PHIL 223
250	SCHA 250
283	HIST 283
290	INTE 298A
292	INTE 298B
293	INTE 298B
400	LUCC 400

Italian

310	400
311	401
432 433	431
437	405
442 443	440

Course	Old Numbers and Equivalents

Journalism

210	C305
302	C300; C301
303	C301
310	C405
343	COMS C340 COMS C342 COMS C343
400	C401
402	C402
446	COMS C446

Leisure Studies

241	EXCI C241 . . . . . BIOP C241
261, 371	LESR C250 . . . . LEIS C342 . . . . EXCI C342 . . . . . BIOP C342
281	LESR C393
427	LESR C426 . . . . EXCI C426 . . . . BIOP C426
430	INTE C430
431	LEIS C430
464	EXCI C464 . . . . . BIOP C464

Liberal Arts College

294, 394	293
493, 497	392

Library Studies

205	201 202
324	325 330
350	331 345
355	331 345
433	C333

Linguistics

310	C210
311	C211
312	410
372	C370, C371
373	C417
400, 401	411
441	SPAN 665
451	ARAB 451

Mathematics and Statistics

208	C202
209	C203
211	205
242, 243	241
262, 263	261
282, 283	281
327, 427	C325
336, 436	C331
337, 437	C431
348, 448	C344
454	C345
464, 467	C461
496	C499

Philosophy

332, 333	331
362	C462
460	C360
467, 468	469 . . . . . C469

Physics

252	C352
297	C392
334	C434
393	C494

Political Science

240	350
319	233
324	231
344	230
349, 352	336
359	451
412	C411 C413

Psychology

280	C391
281	C392
343, 344	342
346, 347	345
349, 350	348
352, 353	351
379	C391

Religion

316, 317	C312
342	C443
350	C325
352	C329
376, 377	C364
378, 379	C465
394	C395
395	C396
396	C397
397	C398
410	C499

Course	Old Numbers and Equivalents

Russian

330	250, 251, 255
400	300, 305

Science and Human Affairs

253	URBS C253
254	URBS C254
353, 354	451
355, 356	450

Simone de Beauvoir Institute

WSDB 290	WMNS 290, WMNS C290, INTE 290 (1979-80)
WSDB 291	WMNS 291, WMNS C291, INTE 291 (1979-80)
WSDB 298	WMNS 298
WSDB 299	WMNS 299
WSDB 370	WMNS 370
WSDB 390	WMNS C393, INTE 390 (1979-80)
WSDB 393	WSDB 394
WSDB 394	WSDB 393
WSDB 398	WMNS 398, INTE C390, C391, C392, C393 (1979-80)
WSDB 399	WMNS 399
WSDB 490	WSDB 492
WSDB 491	WSDB 493, INTE C491 (1979-80)
WSDB 492	WSDB 490
WSDB 493	WSDB 491, INTE C491 (1979-80)
WSDB 498	WMNS 498, WMNS C491, C492, INTE C491 (1979-80), C492
WSDB 499	WMNS 499

Sociology

203	C200
212, 213	210
262, 263	C260
313, 314	C312
327, 328	C326
329, 429	C340
333	C435
336, 337	C335
338, 339	C337
361, 362	C360
374	C426
402, 403	C400
406, 407	C405

Course	Old Numbers and Equivalents

Spanish

220, 221	C220
255	C235
301, 302	C300
406, 407	C405 C465 Prior to 1986-87
411, 412, 413	C410
416, 417	C415
431	C425, C430, C435
441, 442	C440
432	C445, C455
451	C450
481	C485

Teaching of English as a Second Language

203	ESL C203
324	C322, C323
385	C382, C383, C384
413	C411, C412
424	C422, C423
433	C479
485	C482, C483, C484

Theological Studies

210	331, 332
217	215, 216
219	220, 221
222	300, 310
270	471, 472
331, 332	210 330
362	444, 462
366	466
369	468, 469
384	382, 383
387	385, 386
390	456, 457
452	453, 454
493	491
494	492

Course	Old Numbers and Equivalents

Urban Studies

253 ..... SCHA C253
254 ..... SCHA C254
280 ..... INTE C280
379 } INTE C380
382 } URBS C380
481 ..... INTE C481
483 } URBS C482
484 }

Women's Studies
(See Simone de Beauvoir Institute)

200.2 Faculty of Commerce and Administration

NOTE A The use of this note after certain course descriptions indicates that there exists an equivalent course and that students who have the equivalent course may not take the listed course for credits. To find out the equivalents to the listed course refer to the index below.

NOTE C The use of this note after certain course descriptions indicates that with the permission of the Department a student may take the listed course twice for credits provided that a different subject is dealt with the second time.

Course	Old Numbers and Equivalents				
Accountancy					
213		N213	211	313A/B, 300	
	214	N214	211	315B, 300	
217				411A/B, 400 402	
218		N216	Man 411 Fin 416	413B, 402	
220	(120)			320Z	
221	(121)			320Z	
303	C403	N421		503A	421
323		N313	411	415B, 400	
335	C325	N314	412	419B, 408	
407			407	507B	
414		N215 N315	Man 411 Fin 416	511B	425
422	N422				
429		N432	431	517B, 508 519B, 508	432
432		N433	431		433
441		N441	Com Law 441	513A/B, 504	
442				515B, 504	
451		N451	(Computer Auditing New Name)		
461		N461		509A, 507B	
468		Intl Bus	C468		
470			470	560Z	
471			471	560Z	
Administration					
201	(101)	N201		312Z	
202	(102)	N202		312Z	
350		Mark	C350	515B	
Decision Sciences and Management Information Systems*					
222	221				
243		N243	Psyc C315, 242, Econ C221, Math 241 Stat 242	308Z	
244		N244	242 Econ C222, Stat 242	308Z	
250	313 314 315				
253			QUAN 353		
313		N313	411 QA 411	518Z	
314		N314	411 QA 411	518Z	
350	365				
353		N353	Math 415		
354		N354	Math 415		
361	316				
362	412				
371	345				
375	448				
378	444				
381	323				
382	327				
383	423	N423	421		
445		N445	442		
446		N446	442		
451	416				
464	415	N415	412		
466	414				
477	447				
481	424	N424	421		
482	425	N425	422		
483	422				
485	421				
486	427				
490	433	N433			
492	426	N426	422		
493	417				

**NOTE: The 'QUAN' designation has been changed to 'DESC'. Formerly Quantitative Methods*

Course	Old Numbers and Equivalents					
Finance						
214	314					
	215	N215	315,	413	407/A/B, 408	
314		N314	413		409B, 408	215
315		N315	413			314
417		N417				
418		N418				
430		N430	424			
431		N431	424			
440		N440	423,	426	541B	
441		N441	423,	426		
452		N450	423,	427	530Z	
453		N450	423		530Z	
455			427			
460		N460	429			
461		N461	429			
467		Intl Bus	C467			

Management

211		N211	Com Law 211	
213		N213	Psyc 011, 211	Psyc C200
	214	N214	Soc 211	
	215	N215		
266			466	
313				413A/B, 414
315				415B, 414
340		N340	430	
341		N341	430	
345		N345	421	470Z
346		N346	421	470Z
364	464			
365	465			
368		N368	451	503B
369		N369	451	
401				501A
405				505B
407				507A
409				509B
460		N460	453	511B
461		N461	453	
462		N462	432	
463		N463	432	
464		N464	433	
465		N465	433	
466		N466	452	
		Intl Bus	C466	
467		N467	452	
475		N475	211	502Z
476		N476	211	502Z
499				560Z

Marketing

213	N213	211, 421	411,	419A/B, 320
350	N350	211, 421	411,	421B, 320
351	ADMI	C350,	515	
352	N352	431		
402	N402	412,	451	551B
452	N342	412,	451	
453	N453	221, 431	222,	523B
454	N454	414,	461	521A
462	Intl Bus	C462		
463	N463	481		
464	N464			
465	Intl Bus	C465		
485	N485			
490	N490			
491	N491			

200.3 Faculty of Fine Arts

NOTE A The use of this note after certain course descriptions indicates that there exists an equivalent course and that students who have credits for this equivalent course may not take the listed course for credits.

Equivalence prior to 1977-78 are not listed below. For courses with indicated equivalences which are not listed below consult either the Department Office, the Office of Student Affairs, Faculty of Fine Arts or the Registrar's Office.

NOTE C The use of this note after a course description indicates that the course may be repeated for credit. However, either the number or the letter preceding the number must differ.

Course	Old Numbers and Equivalents
Art History	
ARTH 260	ARTH 220
ARTH 262	ARTH 347
ARTH 263	ARTH 348
ARTH 264	ARTH 320
ARTH 266	ARTH 322
ARTH 267	ARTH 234, C234
ARTH 268	ARTH 234
ARTH 290	ARTH 210
ARTH 350	ARTH 320
ARTH 352	ARTH 322
ARTH 360	ARTH 339
ARTH 361	ARTH 339
ARTH 362	ARTH 440
ARTH 363	ARTH 441
ARTH 364	ARTH 342, 442
ARTH 365	ARTH 443
ARTH 366	ARTH 343
ARTH 367	ARTH 455
ARTH 368	ARTH 459
ARTH 369	ARTH 458
ARTH 370	ARTH 244, C444
ARTH 371	ARTH 425
ARTH 373	ARTH 427
ARTH 387	ARTH 484
ARTH 387	ARTH 495
ARTH 396	ARTH 310
ARTH 397	ARTH 410
ARTH 400	ARTH 495
ARTH 401	ARTH 495
ARTH 402	ARTH 415
ARTH 434	ARTH 267, C234
ARTH 499	ARTH 480
Cinema	
FMAN 312	CINE C312
FMAN 313	CINE C313
FMAN 316	FMAN 498E
FMAN 319	FMAN 498B
FMAN 414	CINE C414
FMAN 446, 447	FMAN 445, CINE C436
FMAN 448	CINE C428
FMAN 449	CINE C429
FMPR 231	CINE C311
FMPR 332	CINE C411
FMPR 334	CINE C334
FMPR 335	CINE C335
FMPR 337	CINE C437
FMPR 339	CINE C433
FMPR 341	CINE C333
FMPR 432	CINE C412
FMPR 438	CINE C438
FMPR 442	FMPR 498C
FMPR 446, 447	FMPR 445, CINE C436
FMPR 448	CINE C428
FMPR 449	CINE C429
FMST 200	CINE C200
FMST 211	CINE C211
FMST 212	CINE C212
FMST 314	CINE C426
FMST 315	CINE C427
FMST 321	CINE C321
FMST 322	CINE C322
FMST 323	CINE C323
FMST 325	FMST 498H
FMST 329	CINE 329
FMST 331	FMST 498E
FMST 335	FMST 398
FMST 343	FMST 498B
FMST 422	CINE C422
FMST 423	CINE C423
FMST 425	FMST 498J
FMST 426, 427	FMST 425, CINE C436
FMST 428	CINE C428
FMST 429	CINE C429
Contemporary Dance	
DANC 220	DANC 220, C200
Design Art	
DART 200	DESI 200, C200
DART 202	DESI 202
DART 203	DESI 203
DART 210	DESI 230
DART 300	DESI 311
DART 310	DESI 321

Course	Old Numbers and Equivalents
DART 400	DESI 411, 431
DART 422	DESI 422
DART 423	DESI 423
DART 424	DESI 424
DART 425	DESI 425
DART 440	DESI 440
DART 499	GDES 499

Faculty of Fine Arts

FFAR 320	FFAR 399A

Music

CMUS 200	CMUS 498G, 498H
CMUS 310	CMUS C411, C412
CMUS 320	CMUS C321, C322
CMUS 410	CMUS C413, C414
CMUS 420	CMUS C421, C422
INMS 320	INMS C321, C322
INMS 400	INMS C401, C402
INMS 410	INMS C411
MHIS 311	MHIS C301
MHIS 312	MHIS C301
MPER 200	MPER C201
MPER 220	MPER C201
MPER 221	MPER C201
MPER 300	MPER C301
MPER 370	MPER C431, C432
MPER 390	MPER C330
MPER 470	MPER C433, C434
MPER 490	MPER C430
MPER 498A	MPER 431
MTRP 300	MINE 431, 432
MUSI 210	MUSI C221, C222

Painting and Drawing

ART 261	ART C461
ART 417	ART C420
ART 420	ARTH 267, C234
DRAW 470	ART C436
PTNG 430	PTNG 499A
PTNG 440	PTNG 499B
PTNG 470	ART C436

Printmaking

PHOT 200	PHOT C201, C301
PRIN 210	PRIN C200
PRIN 220	PRIN C200
PRIN 230	PRIN C200
PRIN 310	PRIN C300
PRIN 320	PRIN C300
PRIN 330	PRIN C300
PRIN 450	FBRS C440
PRIN 470	ART C436

Sculpture, Ceramics and Fibres

CERA 230	CAFT C310, C230
CERA 330	CAFT 330
CERA 430	CAFT 430
CERA 450	CAFT C450 ART C436
FBRS 240	CAFT C240
FBRS 260	CAFT C260
FBRS 340	CAFT C340
FBRS 360	CAFT C360
FBRS 440	CAFT C440
FBRS 450	CAFT C450 ART C436
FBRS 460	CAFT C460
FBRS 470	ART C440
FBRS 480	FBRS 460 or FBRS 440
SCUL 450	ART C436

Theatre

DFTT 305	SCEN 305
DFTT 315	SCEN 302, C310
DFTT 326	SCEN 322
DFTT 336	SCEN 306
DFTT 337	SCEN 307
DFTT 414	SCEN 411, C410, C400, C420
DFTT 451, 452	DFTT 450
DFTT 498	SCEN 498
DINE 412	DINE C410
PROD 201	PROD C200, C201
PROD 311	PROD C302
PROD 408	PROD 308
PROD 409	PROD 309
PROD 411	PROD C402
THEA 216	THEA C200, C281
THEA 303	THEA 300, C300
THEA 304	THEA 300, C300
THEA 321	THEA C320
THEA 322	THEA C320
THEA 411	TPER C305
THEA 412	TPER C405
THEA 420	TPER C402
TPER 215	TPER C203
TPER 216	TPER C204
TPER 323	TPER 214
TPER 324	TPER 313
TPER 413	TPER C406, C402

200.6 Faculty of Engineering and Computer Science

NOTE: For old course numbers used prior to 1986-87 see Undergraduate Calendar 1985-86.

NOTE: The use of 'C' in the course prefix is discontinued. Unless otherwise indicated below, a course previously with C prefix is equivalent to the identically numbered one without the C prefix.

Course	Old Numbers and Equivalents
Engineering	
ENGR 342	ENGR C341
ENGR 343	CIVI C354
ENGR 344 } ENGR 345 }	CIVI C353
ENGR 401	ENGR 403
ENGR 451	CIVI C491
ENGR 452	CIVI C452
ENGR 455	CIVI C455
Engineering & Computer Science	
ENCS 245	ENGR C245
ENCS 281	ENGR C281
Computer Engineering	
COEN 311	COEN C411
COEN 312	COEN C413
Electrical Engineering	
ELEC 498	ELEC C482
Industrial Engineering	
INDU 323	ENGR 412
INDU 412	INDU 310

Course	Old Numbers and Equivalents
Quality Control	
QUAL 210	QUAL 362
Computer Science	
COMP 224 & 285	COMP C221
COMP 244 & 291	COMP C241
COMP 292	COMP C251
COMP 294	COMP 391
COMP 295	COMP 392
COMP 296	COMP 393
COMP 297	COMP 394
COMP 325 & 386	COMP C325 & C426
COMP 326	COMP C322
COMP 343 & 385	COMP C443
COMP 353	COMP C453
COMP 392	COMP C341
COMP 423 & 485	COMP C423
COMP 427 & 486	COMP C427
COMP 446	COMP 423
COMP 467	COMP 437

200.7 Credit for Courses with Statistical Content

The following courses offered by departments in the Faculties of Arts and Science, Commerce and Administration, and Engineering and Computer Science have elements in common. Students intending to register for courses with statistics content should carefully consult the regulations given below governing credits for these courses.

1. No more than 3 credits will be awarded for courses listed in Group A

Group A
BIOL 322^3, ECON 221^3, EXCI 221^3, GEOG 362^3, DESC 243^3, MATH 207^3, 242^3; PSYC 315^3, SOCI 212^3, EMAT 271^3

2. No more than 3 credits will be awarded for courses listed in Group B

Group B
BIOL 223^{3*}, ECON 222^3, GEOG 363^{3**}, MATH 243^3, PSYC 316^3, SOCI 213^3, DESC 244^3

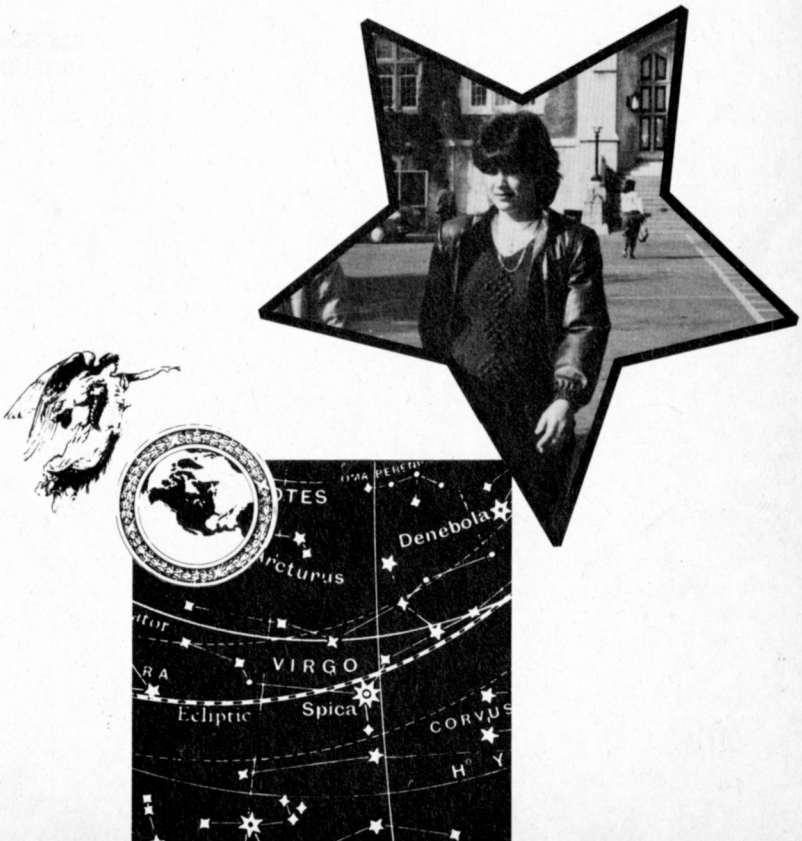
3. Students who have received credit for MATH 242^3, 243^3 will not receive credit for courses in Group A or Group B, nor may they concurrently register for MATH 242^3, 243^3 and for courses in either Group A or B.

4. A maximum of 6 credits may be obtained from among SOCI 212^3, 213^3, PSYC 317^6 and the courses listed in Groups A and B.

5. Students in the 90-credit degree programme will not receive credits for both MATH 207^3 and PSYC 315^3. Extended Credit Programme students and Mature Entrants may take for credit both MATH 207^3 and PSYC 315^3, provided they take the courses in that order. Students who have received credit for PSYC 315^3 and 316^3 and who intend to register for MATH 242^3, 243^3 must first consult with the Psychology Department Undergraduate Programme Adviser.

**This course is no longer offered. Its description will be found in the 1985-86 Undergraduate Calendar.*
***This course is no longer offered. Its description will be found in the 1981-82 Undergraduate Calendar.*

SECTION 300



GRADUATE PROGRAMMES

DIVISION OF GRADUATE STUDIES

All graduate programmes offered by the University are administered by a particular academic department in one of the four Faculties of the University, under the general supervision of the University Board of Graduate Studies and its chair, the Dean of Graduate Studies. The programmes are described in full in the graduate calendar. Existing programmes are a reflection of research interests, of the professors and researchers on staff, and of the needs of the community served by the University. Inquiries concerning these programmes should therefore be sent to the relevant departments.

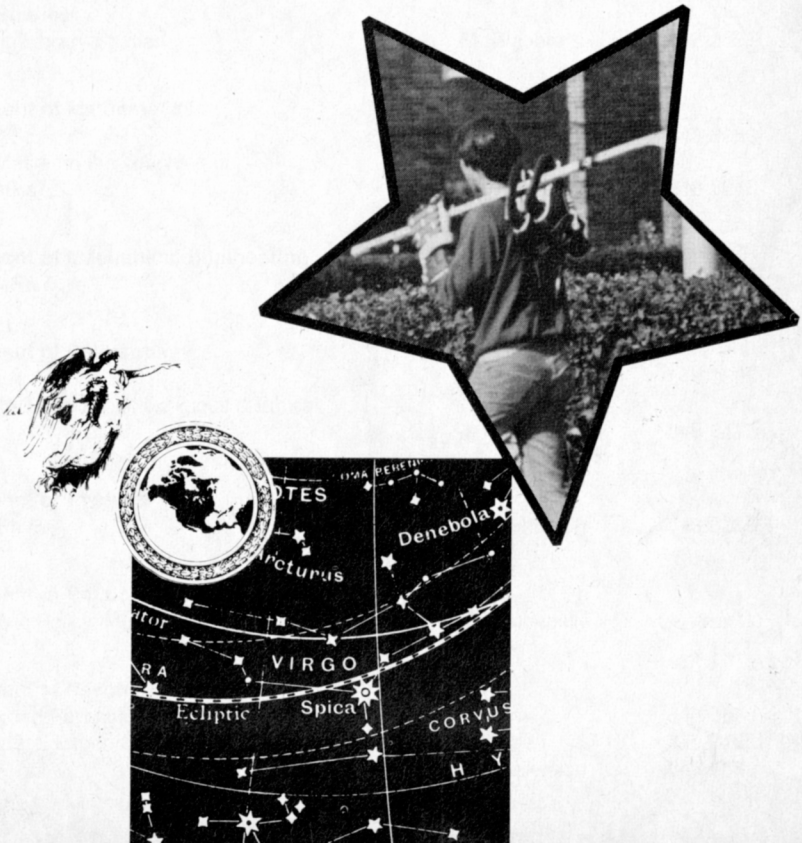
The following graduate programmes are offered at Concordia University. Major options within a programme are also listed. In most cases, courses are given in the late afternoon and evening, or in the evening only, making it possible for both full-time and part-time students to attend. Please contact the graduate programme director at the number indicated for further information.

Department of Applied Linguistics		
M.A.	J. Upshur	848-2446
Department of Art Education and Art Therapy		
M.A. & Ph.D. (Art Education)	D. Pariser	848-4648
M.A. in Art Therapy	J. Byers	848-4646
Diploma in Art Education	L. Sherman	848-4645
Diploma in Art Therapy	J. Byers	848-4646
Department of Art History		
M.A.	B. Foss	848-4693
Department of Biology		
M.Sc.	N. Kapoor	848-3402
Diploma in Ecotoxicology	M. Hogben	848-3388
Centre for Building Studies		
M.Eng. & Ph.D.	D. Feldman	848-3202
Department of Chemistry		
M.Sc. & Ph.D.	T. Adley	848-3337
Diploma in Ecotoxicology	M. Hogben	848-3388
Department of Civil Engineering		
M.Eng. & Ph.D.	M. Sarraf	848-7811
Faculty of Commerce and Administration		
M.B.A.	C. Patterson	848-2784
Executive M.B.A.	D. Doreen	848-2995
M.Sc./Ph.D. (Administration)	J. Segovia	848-2702
Diploma in Accountancy	R. Curnew	848-2745
Diploma in Institutional Administration	D. Acland	848-2746
Diploma in Sports Administration	G. Short/	848-3334
	D. Acland	848-2746
Department of Communication Studies		
M.A. (Media Studies)	J. Berland	848-2557
Ph.D. in Communication	M. Charland	848-2546
Diploma in Communication Studies	N. Metallinos	848-2536

Department of Computer Science		
M.Comp.Sc. & Ph.D.	V.S. Alagar	848-3022
Diploma in Computer Science	V.S. Alagar	848-3022
Department of Economics		
M.A. & Ph.D.	W. Sims	848-3938
Diploma in Economics	W. Sims	848-3938
Department of Education		
M.A. (Educational Studies)	S. Fidler	848-2011
M.A. & PhD (Educational Technology)	R. Bernard	848-2027
M.A. (Child Studies)	S. Weber	848-2025
Diploma in Adult Education	R. Heft	848-2015
Diploma in Early Childhood Education	S. Weber	848-2031
Diploma in Instructional Technology	J. Shaw	848-2044
Department of Electrical and Computer Engineering		
M.Eng. & Ph.D.	O. Ahmad	848-3075
Department of English		
M.A.	D. Sheps	848-2363
Département d'Études Françaises		
Diploma in Translation	J. Woodsworth	848-7518
Faculty of Fine Arts		
M.F.A.	J. Kelly	848-4608
Diploma in Advanced Music Performance Studies	B. Lagacé	848-4712
Department of Geography		
MA (Public Policy and Public Administration Geography Option)	A. Nash	848-2050
Department of History		
M.A. & Ph.D.	F. Bode	848-2402
Faculty of Arts & Science Committee-Humanities		
Ph.D.	J. Barakett	848-2096
Department of Journalism		
Diploma in Journalism	E. Raudsepp	848-2468
Library Studies		
Diploma in Library Studies	M. Giguere	848-2527
Department of Mathematics		
M.A. & M.Sc.	E. Cohen	848-3250
M.T.M. (Master in the Teaching of Mathematics)	N. Herscovics	848-3245
Department of Mechanical Engineering		
M.Eng. & Ph.D.	G. Vatistas	848-3158
Department of Philosophy		
M.A.	V. Zeman	848-2508
Diploma in Theological, Religious & Ethical Studies	J. Hofbeck	848-2478
Department of Physics		
M.Sc. & Ph.D.	D.E. Charlton	848-3285
Department of Political Science		
M.A. (Public Policy and Public Administration)	G. Lachapelle	848-2120
Department of Psychology		
M.A. (Applied Psychology)	R. Kline	848-7556
M.A. (General Experimental Psychology)	R. Wise	848-2195
Ph.D.	J. Chaikelson	848-7539

Department of Religion		
M.A. (History and Philosophy of Religion)	D. Miller	848-2073
M.A. (Judaic Studies)	N. Joseph	848-2069
Ph.D.	F. Bird	848-2068
Diploma in Theological, Religious & Ethical Studies	J. Hofbeck	848-2478
Department of Sociology		
M.A.	J. Jackson	848-2161
Department of Theological Studies		
Diploma in Theological, Religious & Ethical Studies	J. Hofbeck	848-2478
Special Individual Programme (S.I.P.)		
M.A./Ph.D.	M. Kusy	848-3889

SECTION 400



INDEX

Note: Where the subject matter referred to appears on more than one consecutive page only the first page number is given.

A

Academic Calendar: 13

Academic Regulations: 47
- Academic Performance Requirements, 57; see also Faculties
- Academic Re-evaluation, 55
- Appeals, 56
- Code of Conduct, 58
- Engineering and Computer Science, 410
- Evaluation, Grading, Examinations, 53
- General, 48
- Programmes and Regulations, 51
- Weighted Grade Point Average, 57; see also Faculties

Academic Year: 27, 48

Accountancy: 380
- Special Programmes in, 404

Administration: 402

Administration: Bachelor of, 378

Administration: Officers of, 22

Admission: 25
- Faculties and Degrees, 27
- for Individual Faculties:
  - Arts and Science, 134
  - Commerce and Administration, 376
  - Engineering and Computer Science, 410
  - Fine Arts, 457
  - see also Department concerned
- Application for, 29
- Certificate Students, 27; see also Certificates
- Deadline Dates, 29
- Deposit, 29
- Documents Required, 30
- Exemptions and Pro-tanto Credits, 28
- Extended Credit Programme Students, 27
- Fee, 29
- Independent Students, 27, 32
- International Students, 29, 32
- January, 29
- Language Proficiency, 31
- Mature Students, 27, 39
- Process of, 29, 31
- Regulations, 26
- Requirements, 27
- Transcripts, 30
- Transfer Students, 28
- Visiting Students, 27, 32

Adult Education: 191
- Certificate in, 191

Alumni: 104

Andragogy: 191

Anthropology: 335

Appeals: 56, 60, 68, 73

Applied Social Science: 141

Archaeology: see Classics, and Art History

Art Education and Art Therapy: 462
- Certificate in, 462
- Diploma in, 463

Art History: 465

Arts: see Arts and Science

Arts: Bachelor of, 132

Arts and Science: Faculty of (General), 131
- Academic Performance Regulations, 139
- Degree Requirements, 137
- Extended Credit Programme, 136
- General Certificate in Arts and Science, 139
- General Studies in Arts and Science, 133
- Honours Programmes, 138
- Joint Programmes, 140
- Profiles, 134
- Programmes and Admission Requirements, 134

Arts and Science: Faculty of (Departments and Programmes)
- Adult Education, 191
- Andragogy, see Adult Education
- Applied Social Science, 141
- Biology, 145
- Canadian Studies, 154
- Chemistry and Biochemistry, 155
- Classics, 163
- Colleges, Institutes & Schools, 353
  - Liberal Arts College, 355
  - Lonergan University College, 359
  - School of Community and Public Affairs, 362
  - Science College, 365
  - Simone de Beauvoir Institute, 368
- Communication Studies, 168
- Computer Science, 352
- Economics, 177
- Education, 185
- English, 194
- English as a Second Language, 339
- Études françaises, 206
- Exercise Science, 222
- French, see Études françaises
- Geography, 228
- Geology, 234
- History, 240
- Individual Studies Programme, 250

Institute for Co-operative Education, 354
Interdisciplinary Studies, 250
Journalism, 253
Leisure Studies, 256
Library Studies, 259
Mathematics and Statistics, 263
Modern Languages and Linguistics, 272
Philosophy, 284
Physics, 290
Political Science, 297
Psychology, 306
Religion, 314
Russian Studies, 321
Science/Mathematics for Teachers, 322
Science and Human Affairs, 326
Sociology and Anthropology, 329
Teaching of English as a Second Language, 339
Theological Studies, 345
Urban Studies, 350
Women's Studies, 368

Art Therapy: see Art Education
Diploma in, 463

Athletics: 78; see also Exercise Science

Awards:
Arts and Science, 128
Commerce and Administration, 129
Engineering and Computer Science, 129
Fine Arts, 129
Governor General's, 128
Special, 129
University, 128
see also Scholarships

B

Belmore House: Campus Ministry, (Loyola), 98

Biology: 145

Board of Governors: 20

Botany: see Biology

Broadcast Journalism: 169, 253

Building Studies: Centre for, 414

Bursaries: 80

Business Communications: 402

Business, International: 392

Business Studies: 403
Certificate in, 403

C

Calendar: Academic, 13

Campus Centre: 97

Campus Ministry: 98

Canada Employment Centre: 79

Canadian Studies: 154

Centre for Building Studies: 414

Centre for Continuing Education: 107

Centre for Mature Students: 38

Ceramics: 506

Certificate Programmes: 52, 118

Certificate Students: 27

Certificates Offered:
Adult Education, 191
Art Education (Elementary), 462
Arts and Science (General), 139
Business Studies, 403
Community Service, 141
Education, 186
Enseignement du français langue seconde aux adultes, 208
Family Life Education, 142
French Language, 208
History of Quebec, 241
Judaic Studies, 315
Langue françaises, 208
Library Studies, 259
Marketing Research, 399
Mathematics for Teachers (Elementary School Level), 323
(Junior Secondary School Level), 323
Outdoor Education, 223
Quality Control, 451
Scientific Measurement, 156, 291
Teaching of English as a Second Language, 339
Teaching of French as a Second Language to Adults, 208
Teaching of Science (Elementary School Level), 322
Women's Studies, 369

Certification: Teachers, 117

Chaplains: 98

Cheating: 58

Chemistry and Biochemistry: 155

Child Care Services: 98

Child Studies: see Education

Cinema: 471

Civil Engineering: 416, 431

Classes: Cancellation of, 51

Classics: 161

Code of Conduct: Academic, 58
Non-Academic, 66

Colleges, Institutes and Schools: 353

Combination Programmes: 52

Commerce: Bachelor of, 376

Commerce and Administration: Faculty of (General), 375
Academic Performance Regulations, 378
Admission Requirements, 376
Extended Credit Programme, 376
Programmes, 376
Special Certificates, 403
Special Programmes in Accountancy, 404

Commerce and Administration: Faculty of (Departments and Programmes)
Accountancy, 380
Administration, 402
Business Communications, 402
Business Studies, 403
Computer Science, 403
Decision Sciences and Management Information Systems, 383

Economics, 388
Finance, 389
International Business, 392
Management, 394
Marketing, 399
Transportation and Distribution Management, 402

Communication Studies: 168
Diploma in, 169; see also Graduate Calendar

Community Service: Certificate in, 141

Complaint Procedures: 63
Code of Conduct (Non-Academic), 66
Ombuds Office, 65
Sexual Harassment, 69
Supervisory Board, 69

Computer Engineering: 418, 433

Computer Science:
Arts and Science, 352
Bachelor of, 442
Commerce and Administration, 403
Course Descriptions, 445

Concentration: Type of,
Certificate, 52
Combination, 52
Double Minor, 52
Honours, 52
Major, 52
Minor, 52
Requirements, 51
Specialization, 52

Concordia: General, 7

Contemporary Dance: 482

Continuing Education: Centre for, 107
Applied Arts, 109
Business and Administration, 108
Computer Institute, 109
Educational Travel Programme, 109
Language Institute (French and English), 109
Seminars and Workshops, 109

Convocation Medals and Prizes: 127

Co-operative Education: Institute for, 122

Co-operative Programmes:
Building Engineering, 415
Chemistry and Biochemistry, 156
Computer Science, 445
Economics, 177
Exercise Science, 223
Mathematics and Statistics, 264
Physics, 291

Councils:
Arts and Science, 20
Commerce and Administration, 21
Engineering and Computer Science, 21
Fine Arts, 21
Student Life, 22

Counselling Services: 79

Course Load:
Arts and Science, 49
Commerce and Administration, 49
Computer Science, 49
Engineering, 49
Fine Arts, 49, 459
Summer Session, 49

Courses:
Cancellation of, 45
Graded INC, DNW, MED, DISC, 54
Notated as Incomplete, 58
Repeating of, 58
Withdrawal from, 45, 49

Credit:
Courses with Statistical Content, 553
Definition of, 48
Exemptions, 28
External, 28
Pro-tanto, 28
Transfer of, 28

Curriculum: Obligations, 51; Regulations, 51

D

Dance: 482

Day Care Services: 98

Decision Sciences and Management Information Systems: 383

Degree Requirements:
Arts and Science, 137
Commerce and Administration, 377
Computer Science, 442
Engineering, 413
Fine Arts, 458

Degrees Offered: 27

Design Art: 484

Diploma Programmes: 119, 555; see also Graduate Calendar

Disabled Students:
Scholarships and Awards, 91, 93
Services for, 98

Distance Learning: 114

Doctoral Programmes: 119, 555; see also Graduate Calendar

Double Minor: 52

Drama: 510

Drawing: 497

E

Early Childhood Education: 185

Ecology: see Biology, and Geology

Economics (Arts and Science): 177

Economics (Commerce and Administration): 388

Education: 185
Bachelor of (Adult Education), 191
Bachelor of (English as a Second Language), 339
Certificate in, 186
Certificate in Adult, 191
Certificate in Outdoor, 223

Electrical and Computer Engineering: 418, 433

Employment Centre: Canada, 79

Engineering: Bachelor of, 412

Engineering and Computer Science: Faculty of (General), 409
Academic Regulations, 410
Admission Requirements, 410
Canadian Council of Professional Engineering, 413
Co-op Format, 412, 415, 445
Course Descriptions, 425
Degree Requirements, 413
Engineering Mathematics, 425
Extended Credit Programme, 412, 443
Industrial Engineering, 421, 437
Order of Engineers of Québec, 413
Profiles, 410
Registration Regulations, 411

Engineering and Computer Science: Faculty of (Departments)
Building Studies, Centre for, 414, 429
Civil Engineering, 416, 431
Computer Science, 442
Electrical and Computer Engineering, 418, 433
Mechanical Engineering, 421, 438
Quality Control, Certificate in, 451

English: 194
Creative Writing, 194
Playwrighting (English & Theatre), 194
Teaching as a Second Language, 339
Certificate in, 339

English as a Second Language: 339

English Language Courses: Continuing Education, 109

English Language Proficiency Requirement: 31

Enseignement du français langue seconde aux adultes, 208

Equivalents Index:
Arts and Science, 542
Commerce and Administration, 548
Courses with Statistical Content, 553
Engineering and Computer Science, 552
Fine Arts, 550

Études françaises: 206
Certificat en langue française, 208
Certificat d'enseignement du français langue seconde aux adultes, 208

Evaluation: Academic, 53

Examinations: 53, 56
Conduct During, 59
Supplemental, 56, 138

Exercise Science: 222

Extended Credit Programme: 27; see also Faculties

F

Faculty:
Full-time, 520
Part-time, 532
Research, 532

Faculty Councils:
Arts and Science, 20
Commerce and Administration, 21
Engineering and Computer Science, 21
Fine Arts, 21

Faculties:
Arts and Science, 131
Commerce and Administration, 375
Engineering and Computer Science, 409
Fine Arts, 455

Failure Regulations: 54, 459

Family Life Education: Certificate in, 142

Fees:
Academic, 43
Application for Admission, 29
Residence, 98

Fibres: 506

Film Studies: see Cinema

Finance: 389

Financial Aid: Information and Scholarships, 80

Fine Arts: Bachelor of, 458

Fine Arts: Faculty of (General), 455
Academic Performance Requirements, 459
Degree Requirements, 458
Extended Credit Programme, 458
Fine Arts Courses, 459
Inter-Related Arts, 461
Mature Entry, 457
Performing Arts, 456
Portfolio Evaluation Committee, 458
Profiles, 457
Programmes and Admission Requirements, 457
Visual Arts, 456

Fine Arts: Faculty of (Departments),
Art Education and Art Therapy, 462
Art History, 465
Cinema, 471
Contemporary Dance, 482
Design Art, 484
Music, 487
Painting and Drawing, 497
Printmaking and Photography, 501
Sculpture, Ceramics and Fibres, 506
Theatre, 510

Fitness, Recreation and Athletics: 78

Foreign Students: see International Students

French Language Courses: Continuing Education, 109

French Studies: 206
Certificate in French, 208
Certificate in Teaching French as a Second Language to Adults, 208

French Summer School (Sorbonne): 50

Full-time Students: 27, 48

G

General Certificate in Arts and Science: 139

Geography: 228

Geology: 234

German: see Modern Languages

Governors: Board of, 20

Grade Point Average: 57; see also Faculties

Grading: 53

Graduate Programmes: 118, 555; see also
Graduate Calendar

Graduation: 50, 138
Writing Skills Requirement, 52

Greek: see Classics

Guidance Information Centre: 79

H

Harassment: Sexual, 69

Health Services: 97

Hebrew: see Modern Languages

History: 240
Certificate in History of Québec, 241

Honours Programmes: 52; see also
Faculties

Housing: Off-Campus and Residence, 98

I

Immigration Procedures: 100

Incomplete: Courses Graded, 54, 58

Independent Students:
Academic Regulations re, 48
Admission of, 32
Definition of, 27

Individual Studies Programme: 250

Industrial Engineering: 421, 437

Industrial Relations: 394

Institute for Co-operative Education: 122

Insurance:
International Students Insurance, 100

Interdisciplinary Studies: 250
Individual Studies Programme, 250

International Business: 392

International Students:
Admission of, 29, 32
Adviser for, 100
Cost of Living (Expenses), 101
Employment Authorization, 100
Financial Aid, 95
Health Insurance, 100
Immigration Information, 100
Tuition and Fees, 101

Inter-Related Arts: 461

Inter-University Agreements: 50

Italian: see Modern Languages

J

January Admission: 29

Journalism: 253

Judaic Studies: 314
Certificate in, 315

L

Lacolle Centre: 99

Language Institute: 109

Latin: see Classics

Legal Information Services: 97

Leisure Studies: 256

Liberal Arts College: 355

Librarians: 532

Library Studies: 259
Certificate in, 259
Diploma in, 259

Linguistics: see Modern Languages

Loans and Bursaries:
Federal and Provincial, 94
Québec, 92
Emergency Loans, 92

Lonergan University College: 359

M

Major: 52

Management: 394

Management Information Systems: 383

Map: (Loyola), 10; (SGW), 11

Marketing: 399

Marketing Research: Certificate in, 399

Master's Degree Programmes: 119, 555;
see also Graduate Calendar

Mathematics and Statistics: 263
Certificate in Mathematics for Teachers, 323

Mature Entry: see Mature Students

Mature Students:
Admission, 39
Centre for, 38
Definition of, 27, 38
Electives, 40
Failure Regulations, 54
Programme Requirements, 39
Scholarships, 41, 80, 89
Senior Students, 40, 89

Mechanical Engineering: 421, 438

Medals: 127

Minor: 52

Modern Languages and Linguistics: 272

Multiple Submission of Projects: 59

Music: 487

O

Off-Campus Education and Distance Learning:
114

Officers of the Administration: 22
Ombuds Office: 65

Outdoor Education: Certificate in, 223

P

Painting and Drawing: 497

Part-time Students: 27, 48

Performing Arts: 456

Philosophy: 284

Photography: 501

Physics: 290

Plagiarism: 58

Playwrighting: 194, 510

Political Science: 297

Portuguese: see Modern Languages

Printmaking and Photography: 501

Prizes: 127

Profiles:
Arts and Science, 134
Engineering and Computer Science, 411
Fine Arts, 457

Programme Profiles:
Arts and Science, 134
Engineering and Computer Science, 411
Fine Arts, 457

Programmes:
Certificate, 52, 118
Combinations, 52
Continuing Education, 108
Co-operative, 122
Diploma, 118, 555; see also Graduate Calendar
Distance Learning, 114
Doctoral, 119, 555; see also Graduate Calendar
Double Minor, 52
Extended Credit Programme, 27; see also Faculties
Graduate, 118, 555; see also Graduate Calendar
Honours, 52, 138
Major, 52
Master's, 119, 555; see also Graduate Calendar
Mature Students, 38
Minor, 52
Off-Campus Education, 114
Of Interest to Teachers, 117
Specialization, 52

Projects: Multiple Submission of, 59

Psychobiology: see Psychology

Psychology: 306

Q

Quality Control: Certificate in, 451

Quantitative Methods: 383

R

Re-evaluation: Academic, 55

Registration: 34, 45, 49
Off-Campus Education, 114

Regular Session: 14, 27, 48

Regulations:
Academic, 47
Admission, 26
Curriculum, 51
Evaluation, Grading, Examinations, 53
Failure, 54
Obligations, 51
Programmes and Regulations, 51
see also Faculties

Religion: 314
see also Theological Studies

Requirements:
Academic Performance, 57
Admission, 27
Concentration, 51
Graduation, 50, 138
Residence, 27, 49
University Writing Test, 52

Residence and Housing: 98

Residence Requirements: 27, 49

Rights and Responsibilities: 63

Russian: see Modern Languages

Russian Studies: 321

S

Scholarships: 41, 80
see also Awards

School of Community and Public Affairs: 362

Science:
Bachelor of, 132
Certificate in Teaching of, 322

Science College: 365

Science and Human Affairs: 326

Science/Mathematics for Teachers: 322

Scientific Measurement: Certificate in,
Chemistry Option, 156
Physics Option, 291

Sculpture, Ceramics and Fibres: 506

Second Bachelor's Degree:
Residence Requirements, 49

Senate: Members of, 20

Senior Students: 40, 89

Sexual Harassment: Policy on, 69

Simone de Beauvoir Institute: 368

Sociology and Anthropology: 329

Spanish: see Modern Languages

Specialization: 52

Statistics: 263, 553

Status:
Full-time, 27, 48
Part-time, 27, 48
see also Students: Classification of

Students: Classification of
Certificate, 27
Extended Credit Programme, 27
Independent, 27, 32
Mature, 27, 38
Transfer, 28
Undergraduate, 27
Visiting, 27, 32

Student Associations:
Alumni, 104
Concordia University Students (CUSA), 104
Graduate Students, 104

Student Exchange Programme (International): 50

Student Life: Council on, 22
see also Student Services

Student Request Committees: 50

Student Services: 77
Campus Ministry, 98
Canada Employment Centre, 79
Child Care, 98
Disabled Students, Services for, 98
Fitness, Recreation and Athletics, 78
Guidance Services, 79
Health Services, 97
International Students, 100
Lacolle Centre, 99
Legal Information Services, 97
Residence and Housing, 98
Scholarship and Financial Aid Information, 80
Social and Cultural Activities, 97

Studio Art: see Painting and Drawing

Summer Session: 17, 27, 48

Supplemental Examinations: 56, 138, 411

T

Teacher Certification: 117

Teachers: Certificate in Mathematics for, 323
Programmes of Interest to, 117

Teaching of English as a Second Language: 339
Certificate in, 339

Teaching of French as a Second Language to Adults: Certificate in, 208

Teaching of Science: Certificate in, 322

Theatre: 510

Theological Studies: 345; see also Religion

Traduction: see Études françaises

Transcripts: 30, 50

Transfer Credits: 28, 50

Transfer Students: 28, 457

Translation: see Études françaises

Transportation and Distribution Management: 402

Tuition: 43, 101

U

Undergraduate Students: 27, 104

University Writing Test Requirement: 52

Urban Studies: 350

V

Visiting Students:
Academic Regulations re, 48
Admission of, 32
Definition of, 27

Visual Arts: 456

W

Weighted Grade Point Average: 57
see also Faculties

Western Society and Culture: 356

Withdrawal from Courses or University: 45, 49

Women's Studies: 368
Certificate in, 369

Writing, Creative: see English

Writing Test Requirement: 52

1991

January

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

March

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

July

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

September

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

October

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

November

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

December

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

1992

January

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

March

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		